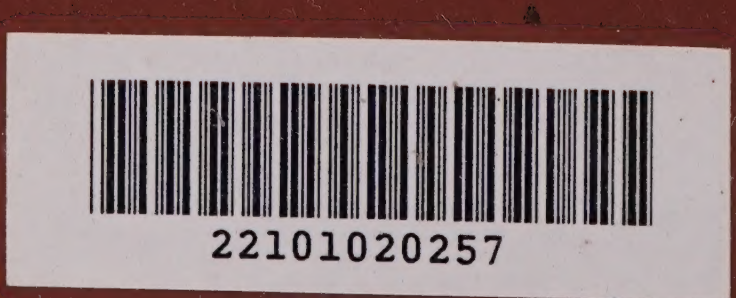
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Jacob P. Power.

Philadelphia College of Pharmacy

Session 1873-74.

PHARMACOPŒIA

OF THE

UNITED STATES.

THE

PHARMACOPŒIA

OF THE

UNITED STATES OF AMERICA.

FIFTH DECENNIAL REVISION.

BY AUTHORITY OF THE

NATIONAL CONVENTION FOR REVISING THE PHARMACOPŒIA,

HELD AT WASHINGTON, A.D. 1870.

PHILADELPHIA:
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PROCEEDINGS

OF THE

NATIONAL CONVENTION OF 1870

FOR REVISING THE PHARMACOPŒIA.

FIFTH DECENNIAL REVISION.

THE Convention for the fifth decennial revision of the Pharmacopœia of the United States, in accordance with the call of the President of the last Convention, met in Washington on Wednesday, May 4th, 1870. The following delegates were announced as duly appointed:

A. LITTON, M.D., and J. S. B. ALLEYNE, M.D., from the St. Louis Medical College;

Messrs. W. S. THOMPSON, J. FARIS MOORE, and LOUIS DOHME, from the Maryland College of Pharmacy;

CHARLES O. CARTMAN, M.D., from the Missouri Medical College;

O. F. POTTER, M.D., HUBERT PRUIN, M.D., and EUGENE L. MASSOTT, from the St. Louis College of Pharmacy;

Messrs. ALBERT E. EBERT, HENRY BIROTH, and C. LEWIS DIEHL, from the Chicago College of Pharmacy;

JOHN B. BIDDLE, M.D., and B. HOWARD RAND, M.D., from the Jefferson Medical College;

THOMAS ANTISEL, M.D., C. H. LIEBERMAN, M.D., and B. F. CRAIG, M.D., from the Medical Society of the District of Columbia;

J. S. WELFORD, M.D., and R. S. J. PEEBLES, M.D., from the Medical College of Virginia;

Messrs. GEORGE F. H. MARKOE and SAMUEL M. COLCORD, from the Massachusetts College of Pharmacy;

CALEB GREEN, M.D., WILLIAM MANLIUS SMITH, M.D., and EDWARD R. SQUIBB, M.D., from the Medical Society of New York;

GEORGE B. WOOD, M.D., ROBERT BRIDGES, M.D., and HORATIO C. WOOD, Jr., M.D., from the College of Physicians of Philadelphia;

Messrs. WILLIAM HEGEMAN, WILLIAM NEERGAARD, and P. W. BEDFORD, from the College of Pharmacy of New York;

GEORGE M. DOVE, M.D., and JOHN C. RILEY, M.D., from the National Medical College of Washington;

JOSEPH CARSON, M.D., and ROBERT E. ROGERS, M.D., from the University of Pennsylvania;

Messrs. WILLIAM PROCTER, Jr., JOHN M. MAISCH, and ALFRED B. TAYLOR, from the Philadelphia College of Pharmacy;

MARTIN V. B. CLARKE, M.D., and ROBERT D. MURRAY, M.D., from the College of Pharmacy of Baldwin University;

THOMAS E. JENKINS, M.D., from the Medico-Chirurgical Society of Louisville, Kentucky.

T. CLAY MADDOX, M.D., from the Baltimore Medical Association;

F. HOWARD, M.D., and J. E. MORGAN, M.D., from the Medical Department of Georgetown College;

CHARLES SMART, M.D., from the War Department, U. S.;

W. S. W. RUSCHENBERGER, M.D., from the Navy Department, U. S.;

HARVEY L. BOYD, M.D., and J. E. LINDSAY, M.D., from the Washington University of Baltimore;

S. A. GREENE, M.D., ROBERT AMORY, M.D., and JOHN BORLAND, M.D., from the Massachusetts Medical Society;

HENRY T. CUMMINGS, M.D., from the Maine Medical Association;

CHARLES A. LEE, M.D., from the University of Buffalo;

W. J. C. DUHAMEL, M.D., from the Medical and Chirurgical Society of Maryland;

J. R. UHLER, M.D., from the Baltimore Medical Association;

WILLIAM K. BOLLING, M.D., from the University of Nashville;

S. C. CHEW, M.D., from the University of Maryland;

SILAS L. LOOMIS, M.D., and CHARLES B. PURVES, M.D., from the Pharmaceutical College of Harvard University;

FREDERICK HORNER, M.D., from the University of Virginia;

CHARLES H. THOMAS, M.D., from the Woman's Medical College of Philadelphia.

It was *Resolved*, "That such members of Congress, of the two Houses, as are graduates of regular medical schools, shall be invited to attend the meetings of the Convention, and participate in its deliberations, and also the Surgeon-

General of the United States Army, and the chief of the Bureau of Medicine and Surgery of the United States Navy.

Dr. E. Loyd Howard, of Baltimore, and Dr. Thomas Miller, of the District of Columbia, were invited to take seats in the Convention, and to participate in its deliberations.

The Committee to nominate permanent officers reported as follows: President, Dr. Joseph Carson, of Philadelphia; Vice-Presidents, Dr. Thomas Miller, of District of Columbia, and William Procter, Jr., of Philadelphia; Secretary, Dr. John C. Riley, of District of Columbia; Assistant Secretary, Dr. James M. Morgan, of District of Columbia.

The report of the Committee of Revision and Publication of the United States Pharmacopœia for 1860 was presented and accepted.

The delegates from the several medical and pharmaceutical bodies represented in the Convention were called on for such contributions as had been prepared in furtherance of the revision of the Pharmacopœia, when the following were presented: by Mr. Ebert, from the Chicago College of Pharmacy; by Dr. H. C. Wood, Jr., from the Philadelphia College of Physicians; by Mr. Hegeman, from the New York College of Pharmacy; by Mr. Taylor, from the Philadelphia College of Pharmacy; by Mr. Moore, from the Maryland College of Pharmacy, and one from the Missouri Medical College, which were referred to a Committee of five, appointed to report a plan for the revision of the Pharmacopœia.

The following gentlemen were appointed by the President a Committee to report a plan for the revision of the Phar-

macopœia: Dr. Bridges, Mr. Procter, Mr. Colcord, Dr Welford, and Dr. Lee.

The Committee reported the following resolutions, which were approved:

Resolved, That a Committee of revision and publication be appointed, to consist of fifteen members, including the President of this Convention as one, to which shall be referred all communications relating to the revisions of the Pharmacopœia, and of this Committee three shall form a quorum.

Resolved, That this Committee shall meet in the city of ———, and be convened as soon as practicable by the President of the Convention for final organization.

Resolved, That the Committee shall be authorized to publish the work after its revision, and to take all other measures that may be necessary to carry out the views and intentions of the Convention.

Resolved, That if, in the judgment of the Committee of Revision, it should become necessary before the meeting of the Convention of 1880 to revise its labours, it is hereby authorized to publish a new edition.

Resolved, That the expenses of the Committee on Revision shall be paid from the income of the copyright.

Resolved, That measures of capacity be abandoned in the Pharmacopœia, and that the quantities in all formulas be expressed both in weights and in parts by weight.

Resolved, That in the revision of the officinal list and formulas, the wants of the medical profession in all parts of the United States should be considered in reference tc local peculiarities in climate and population, and that for

these reasons, the scope of the work be extended rather than abridged.

Resolved, That the Committee of Revision shall have power to fill its own vacancies.

Resolved, That after the completion of its labors, the Committee shall transmit a report of its proceedings to the Secretary of this Convention, to be laid before the next Convention.

Resolved, That the fourteen remaining members of the Committee of Revision and Publication be selected by a nominating committee formed of one delegate from each institution represented in this Convention, and of one from the army and navy respectively, to be appointed by the President.

It was *Resolved*, That the blank in the second resolution be filled by inserting Philadelphia; which city was thus selected for the sittings of the Committee of Revision.

It was *Resolved*, That this Committee be authorized to investigate any new medicine that may be brought forward, and to devise formulas for the appropriate preparations of it, and to publish such formulas, and that these formulas shall thenceforward be considered officinal.

The Committee of Revision, appointed in accordance with the foregoing plan and resolutions, consisted of Dr. Carson, Dr. G. B. Wood, Alfred B. Taylor, John M. Maisch, Dr. Robert Bridges, of Philadelphia, Dr. W. Manlius Smith, of New York, Albert E. Ebert, of Chicago, J. Faris Moore, of Baltimore, G. F. H. Markoe, of Boston, Dr. John C. Riley, of Washington, Dr. Thomas Jenkins, of Louisville, Dr. Charles A. Lee, of Buffalo, N. Y., Dr. J. S. Welford,

Richmond, Va., Dr. F. Wentzell, San Francisco, Dr. W. S. W. Ruschenberger, U. S. Army and Navy.

It was *Resolved*, That the rules adopted by the Convention of 1860 for the meeting of 1870 be adopted for the Convention of 1880, simply changing the dates.

These rules are the following:

1. The President of this Convention shall, on the first day of May, 1879, issue a notice, requesting the several incorporated State Medical Societies, the incorporated Medical Colleges, the incorporated Colleges of Physicians and Surgeons, and the incorporated Colleges of Pharmacy throughout the United States, to elect a number of delegates not exceeding three, to attend a General Convention, to be held in Washington on the first Wednesday in May, 1880.

2. The several incorporated bodies thus addressed shall also be requested by the President to submit the Pharmacopœia to a careful revision, and to transmit the result of their labours through their delegates, or through any other channel, to the next Convention.

3. The several medical and pharmaceutical bodies shall be further requested to transmit to the President of this Convention the names and residences of their respective delegates, as soon as they shall have been appointed; a list of whom shall be published, under his authority, for the information of the medical public, in the newspapers and medical journals, in the month of March, 1880.

4. In the event of the death, resignation, or inability to act of the President of the Convention, these duties shall devolve upon the Vice-Presidents in succession; or, should

the Vice-Presidents also be prevented from serving, upon the Secretary or Assistant Secretary, the latter acting in the event of the inability of the former.

Dr. B. F. Craig, of the District of Columbia, offered the following resolution, which was adopted:

Resolved, That the Committee of Revision be instructed to include some part of the metrical system in the list of officinal weights and measures.

On motion, it was—

Resolved, That the thanks of this Convention are due to the Faculty of the National Medical College of the District of Columbia for the use of their building for the purposes of the Convention.

The Convention then adjourned.

PREFACE.

THE Committee appointed by the Convention of 1870 to revise the United States Pharmacopœia proceeded as soon as practicable to the execution of its duties. It commenced its labours in June of that year, and has been continuously engaged in them until the completion of the work now issued. In introducing the work to the public, it is proper that a review should be presented of the additions that have been made to the last edition, of the changes and modifications that have been deemed expedient, and of the considerations by which the Committee has been actuated in endeavouring to execute the task of revision assigned to it by the Convention.

In accordance with the resolutions of the Convention, the "scope of the work has been extended rather than abridged;" and it has been the desire of the Committee to adapt it to the wants of our extended country without losing sight of the conservative character necessarily pertaining to a National Pharmacopœia. Such a work must necessarily follow in the wake of advancing knowledge; it is no part of its mission to lead in the paths of discovery. It should gather up and hoard for use what has been determined to be positive improvement, without pandering to fashion, or to doubtful novelties in Pharmaceutical Science.

By such apprehension of the duties imposed upon it has the Committee been guided.

The subject of weights and measures has been carefully considered by the Committee, and it has been determined to adhere to the old standard of troy weight, which is now universal with the pharmaceutists of the United States. That this may be understood, the same specifications have been retained as in the last revision. An addition that has been made to the present Pharmacopœia, is an exposition, at the end of the book, of the value of each specific weight in fractional parts, presenting the full table of troy weights. A similar table of liquid measure is also given.

In the series of resolutions passed by the Convention for the guidance of the Committee, it was directed "that measures of capacity be abandoned in the Pharmacopœia, and that the quantities in all formulas be expressed both in weights and in parts by weight." To execute such directions, entails the use of a metrical system not employed in this country or in England, and which would have to be constructed for the purpose. Such a change would involve changed proportions in almost every formula, and would produce a corresponding disturbance in many of the doses. Moreover, such directions were not anticipated in any of the revisions handed to the Committee; and to institute such extended experiment as would cover the whole ground of the directions of the Pharmacopœia, would entail so much expenditure of time, labour, and cost as to render the plan impracticable. This view of the question was unanimously taken by the Committee at a meeting consisting of ten members.

Additional tables have been given, which express: 1. the "Relation of Weights and Measures of the United States Pharmacopœia to each other;" 2. the "Relation of Measures of the United States Pharmacopœia to Cubic Measure;" 3. the "Relation of Weights of the United States Pharmacopœia to Metrical Weights;" 4. the "Relation of Metrical Weights to Weights of the United States Pharmacopœia;" 5. the "Relation of Measures of the United States Pharmacopœia to Metrical Measures;" and 6. the "Relation of Metrical Measures to Measures of the United States Pharmacopœia." Besides these are given tables of the Metrical System.

In the preliminary notices the same directions are retained as in the last edition of the Pharmacopœia with respect to temperature, specific gravity, saturation, stoppage of bottles, percolation, and fineness of powders.

By reference to the tables, it will be found that *twenty-four* articles have been added to the primary list of the Materia Medica, and *three* to the secondary; while *one* article has been dismissed from the primary list, and *four* from the secondary. In defining the articles that pertain to these lists, greater precision has been given to the language employed, by which the nature of the substance is more clearly indicated. The notes, moreover, appended to the descriptions of the several substances, have been altered in expression, or extended, so as to render them more precise or explanatory.

To the preparations *eighty-two* have been added, while *seven* have been dismissed. Of those that have been introduced, some are of entirely new medicinal articles, as

the benzoate, bromide, and iodide of ammonium, digitalinum, extract of American hemp, extract of Calabar bean, citrate of iron and strychnia, oxalate of iron, yellow oxide of mercury, citrate of lithium, pyroxylon, arseniate of sodium, etc.; while others are new preparations of old articles of the Materia Medica. Under the head of new classes will be found CHARTÆ, including cantharides paper and mustard paper; GLYCERITA, including glycerites of carbolic acid, of gallic acid, of tannic acid, of tar, and of borate of sodium; SUPPOSITORIA, including suppositories of carbolic acid, of tannic acid, of aloes, of assafetida, of belladonna, of morphia, of opium, of lead, and of lead and opium; and SUCCI, including juice of conium, and juice of dandelion.

To the fluid extracts twenty-two new ones have been added, and a feature that presents itself in the preparation of a majority of this class is the employment of glycerin in connection with alcohol, by which the latter is much economized, and objections to former processes have been removed. To the class LIQUORES five new solutions have been added: solutions of chloride of arsenic, of chloride of iron, of permanganate of potassium, of arseniate of sodium, and of chloride of zinc. Two new tinctures have been introduced, viz., tincture of orange peel, and tincture of benzoin; while the class TROCHISCI has been increased by four new preparations: those of tannic acid, of morphia and ipecacuanha, of chlorate of potassium, and of santonin. To the class UNGUENTA six new ointments have been added.

The introduction of new medicines and preparations, or changes made in the character of existing preparations,

have rendered necessary, alterations in the Latin officinal names; thus, *alumen* is used to indicate what is now the commercial salt, the *sulphate of aluminium and ammonium*, instead of the *sulphate of aluminium and potassium*, which, though still retained, is not easily procured; the term *alcoholicum* has been dismissed in all cases where there is but a single extract of a medicinal substance, and this is specified by the term *extractum*, as "extractum nucis vomicæ," instead of "extractum nucis vomicæ alcoholicum." The term *pilula* has been used for *pilulæ* in cases where the division into pills is not specially directed, and the preparation as a mass is in readiness for dispensing according to the direction of physicians.

Some alteration has been made in the chemical nomenclature of the Pharmacopœia in order to place the work in accord with the progress of chemical science. Without adopting the new nomenclature of chemistry to its full extent, such modification of the former designation of substances has been introduced as to give uniformity; all the salts of the alkaline metals are designated as of the particular metal, and not of its oxide: thus, barii carbonas is substituted for barytæ carbonas, calcii carbonas præcipitata for calcis carbonas præcipitata, potassii citras for potassæ citras, etc. These changes have been made with deference to the nomenclature which is now being employed by chemists, and the modifications thus made will probably soon be the language of pharmacy. The changes that have been made in the English names are in accordance with those that have been made in the Latin.

Several transpositions of articles have been made; thus,

extractum cannabis has been transferred from the primary list to the preparations, while acidum valerianicum and zinci valerianas have been transferred from the preparations to the primary list; gelsemium, hydrastis, and ruta have been taken from the secondary list and placed in the primary.

In prosecuting their labours and publishing their results, the Committee have been influenced by an earnest desire to render the work worthy of acceptance by the two professions of pharmacy and medicine; and to this end much anxious thought and devotion of time have been expended. Besides many meetings held by the Committee, individual members have given their time to the work of experiment and research. This was rendered necessary by the meagreness of details that characterized the majority of the reports submitted to the Committee, which in many cases presented criticism or suggestion without furnishing the precise form of alteration or amendment in the processes, or, in the case of new medicines, indicating their modes of preparation. The Committee would recommend, in view of subsequent revision, that the reports of medical and pharmaceutical bodies which are interested in the perfection of our national standard, should be made full and explicit in details, and leave to the Committee the task of verification and testing rather than that of original investigation.

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PRELIMINARY NOTICES.

WEIGHTS AND MEASURES.

THE weights and measures used by physicians and apothecaries in the United States, when prescribing and preparing medicines, are the following:

Weights.—These are derived from the *troy pound*, and are exhibited in the following table, with their signs annexed:

The pound	℔	contains	twelve ounces,	℥
The ounce			eight drachms,	ʒ
The drachm			three scruples,	℈
The scruple			twenty grains,	gr.

In order to avoid the danger of mistakes from confounding the troy and avoirdupois pounds, the term *pound* is disused in the formulas of this work, and the desired weight is expressed in ounces, each containing four hundred and eighty grains. This ounce is always printed *troyounce*, to guard against the error of substituting for it the avoirdupois ounce, consisting of four hundred and thirty-seven and a half grains. The drachm and scruple are also disused, and replaced by their equivalents in grains.

It is highly important that persons engaged in preparing medicines should be provided with troy weights. But those who are not so provided can make their avoirdupois weights available as substitutes for troy weights, by bearing in mind that 42.5 grains, added to the avoirdupois ounce, will make it equal to the troyounce; and that 1240 grains, deducted from the avoirdupois pound, will reduce it to the troy pound.

Measures.—These are derived from the *wine gallon,* and are given in the following table, with their signs annexed:

The gallon	C	contains	eight pints,	O
The pint			sixteen fluidounces,	f℥
The fluidounce			eight fluidrachms,	f℥
The fluidrachm			sixty minims,	♏

In this work the term *gallon* is not used, that measure being always expressed in pints.

At the temperature of 60°, a pint of distilled water weighs 7291.2 grains, a fluidounce 455.7 grains.

TEMPERATURE.

When there is occasion to indicate the degree of heat, the scale of Fahrenheit's thermometer is employed. By the term *gentle heat,* is meant any temperature between 90° and 100°.

SPECIFIC GRAVITY.

When the specific gravity of a substance is mentioned, its temperature is assumed to be at 60°.

SATURATION.

When an acid or alkali is directed to be saturated, the point of saturation is to be ascertained by means of litmus and turmeric, in the way usually followed by chemists.

STOPPAGE OF BOTTLES.

In all cases in which bottles are directed to be well stopped, they must be closed with glass stoppers.

PERCOLATION.

The kind of filtration, known as *percolation* or the *process of displacement*, directed in this Pharmacopœia, consists in subjecting a substance or substances, in powder, contained in a vessel called a *percolator*, to the solvent action of successive portions of a menstruum, in such a manner that the liquid, as it traverses the powder in its descent to the recipient, shall become charged with the soluble portion

of it, and pass from the percolator free from insoluble matter.

When the process is successfully conducted, the first portion of the filtered liquid, or *percolate*, will be nearly saturated with the soluble constituents of the substance treated; and, if the quantity of menstruum be sufficient for its exhaustion, the last portion will be nearly destitute of colour, odour, and taste.

The percolator should be either conical, or nearly cylindrical with a conical termination at the smaller end, and provided internally with a porous or colander-like partition or diaphragm, resting transversely immediately above its neck, for the support of the powder. Ordinary glass funnels, varying in capacity from one to eight pints, are to be preferred for most of the operations requiring percolation in this Pharmacopœia; but percolators may also be made of earthenware or tinned iron, especially of the latter material when required of large size. Tinned iron, however, should not be used when the liquid acts chemically on the material. In the several formulas in which percolators are used, their form and material will always be designated when there is a preference in these respects. In cases in which these variations of the instrument are indifferent, the term percolator simply will be employed. When a funnel is used, a circular piece of muslin or of lint, pressed into the neck by means of a cork with notched sides, forms a good dia-

phragm; but in all cases a similar piece of muslin, moistened slightly with the menstruum, should be interposed between the diaphragm and the powder, to prevent the passage of the fine particles of the latter.

The substance to be subjected to percolation, after having been reduced by sifting to a uniform powder, of the fineness indicated in the formula, is to be put into a basin with the specified quantity of the menstruum, and the two rubbed together until the powder is uniformly moistened.

A portion of the powder is now to be carefully placed upon the diaphragm, prepared as above directed, and pressed gently until the muslin, resting against the sides of the percolator just above the neck, is covered with a uniform layer. The remainder of the powder is then to be transferred to the percolator, and compressed evenly and firmly, and the levelled surface covered with a circular piece of moistened muslin, or paper, so that the liquid poured upon it may penetrate equably, and not disarrange the powder.

The percolator being now properly supported, with its neck in a bottle previously marked for the quantity or quantities of liquid to be percolated, the menstruum is to be poured on, until the space above is nearly filled; and a layer of it must be constantly maintained above the powder, so as to prevent the access of air to its insterstices, until all

has been added, or until the requisite quantity of percolate has been obtained.

If the fineness of the powder and its arrangement in the percolator have been properly attended to, the percolate will pass out, by drops, with greater or less rapidity, according to the size of the percolator; but if, by reason of accidental imperfection in the powder, or in the packing, the liquid pass more rapidly than this, the neck of the percolator should be obstructed by means of a cork until the requisite slowness has been attained.

When the dregs of a tincture are to be subjected to percolation, after maceration with all the menstruum, the liquid portion should be drained off, the solid portion packed in a percolator as before described, and the liquid gradually poured on, until all has passed the surface, when immediately a sufficient quantity of the original menstruum should be poured on to displace the absorbed liquid, until the prescribed quantity of the tincture has been obtained.

FINENESS OF POWDERS.

As different degrees of fineness are necessary in powders, according to their nature and mode of treatment, the special degree required is designated in the several formulas. For this purpose the terms very fine, fine, moderately fine,

moderately coarse, and coarse are used ;—the powder passed through a sieve of eighty or more meshes to the linear inch being designated as *very fine ;* through one of sixty meshes, *fine ;* through one of fifty meshes, *moderately fine ;* through one of forty meshes, *moderately coarse ;* and through one of twenty meshes, *coarse.*

MATERIA MEDICA.*

PRIMARY LIST.

ABSINTHIUM. *Wormwood.* Compositae. Composite Family

The tops and leaves of Artemisia Absinthium.

ACACIA. *Gum Arabic.* Leguminosae Pulse "

A gummy exudation from Acacia vera, and other species of Acacia.

ACETUM. *Vinegar.*

Impure dilute acetic acid prepared by fermentation.

Vinegar is not coloured by hydrosulphuric acid, and yields no precipitate when boiled with a solution of chloride of calcium. A fluidounce is neutralized by not less than thirty-five grains of

---

* In the catalogue of Materia Medica, the names of medicinal substances are given in Latin and English; and synonymes in English are added, when they serve to fix the meaning of less familiar officinal names. Such explanations as are necessary to identify the substances mentioned are also given, together with brief notes indicating the means of ascertaining the purity and genuineness of those most liable to be sophisticated. The names of the plants referred to, when not otherwise indicated, are those of Willdenow's edition of Linnæus's *Catalogus Specierum Plantarum*, and of the animals, those of the *Règne Animale* of Cuvier. When De Candolle is cited as authority, reference is had to the *Prodromus Systematis Naturalis* of that author.

bicarbonate of potassium, and after neutralization the liquid is free from acrid taste.

ACIDUM ACETICUM. *Acetic Acid.*

Acetic acid, of the specific gravity 1.047.

A colourless liquid having a pungent odour free from empyreuma. It is wholly volatilized by heat, yields no precipitate with chloride of barium or nitrate of silver, and does not change colour on the addition of hydrosulphate of ammonium. When neutralized with ammonia, it gives no precipitate with iodide of potassium. If silver be digested in it, and muriatic acid afterwards added, no precipitate will be formed. Of this acid one hundred grains neutralize sixty grains of bicarbonate of potassium, and contain thirty-six grains of monohydrated acetic acid.

ACIDUM ARSENIOSUM. *Arsenious Acid.*

Sublimed arsenious acid in masses.

Arsenious Acid is entirely volatilized without fusion at a temperature not exceeding 400°, emits an alliaceous odour when thrown on ignited charcoal, and is completely dissolved by boiling water. The solution yields a yellow precipitate on the addition of hydrosulphuric acid, a lemon-yellow precipitate on the addition first of ammonia and then of nitrate of silver, and a green precipitate with potassa and sulphate of copper. Of this acid one hundred grains, boiled with dilute muriatic acid and then treated with hydrosulphuric acid, yield a deposit of tersulphuret of arsenic, weighing one hundred and twenty-four grains.

ACIDUM CARBOLICUM. *Carbolic Acid.*

Syn. Phenic Acid. Phenylic Alcohol.

A solid substance obtained from the products of the distillation of coal-tar, between the temperatures of 300° and 400°.

Carbolic Acid is either in acicular crystals, or in crystalline masses; white or colourless when perfectly pure, but, even when

slightly impure, either reddish or becoming so on exposure, deliquescent, and readily assuming the liquid state in the presence of a little water, yet not dissolving; of a strong odour and taste, recalling those of creasote, but distinct; fusible at from 93° to 106°, forming an oily liquid, and boiling at from 359° to 367°; the higher melting and lower boiling points being those of the pure acid. It is soluble in from 20 to 33 parts of water, the purest being most soluble. Alcohol, ether, glycerin, and the essential oils dissolve it freely. It combines with alkalies and other salifiable bases, but its compounds have still an alkaline reaction, and are decomposed by the feeblest acids, even by carbonic acid. It does not change the colour of test-paper. Its solution coagulates collodion. A piece of pine wood dipped first into an alkaline solution of carbolic acid, and, after a short interval, into muriatic acid, assumes, in the course of half an hour, a deep blue colour. The solution has no effect on polarized light.

ACIDUM CARBOLICUM IMPURUM. *Impure Carbolic Acid.*

A liquid obtained from coal-tar oil, by treating it first with an alkali, and then with an acid, and finally distilling. Impure Carbolic Acid is either colourless or has a brown shade; but if originally colourless, it becomes reddish-brown on exposure. It has the odour and taste of the pure acid, but sometimes modified by an empyreumatic odour of tar. It consists of carbolic and cresylic acids, in variable proportion, with impurities derived from coal-tar, which vary from ten to thirty per cent As the two acids are soluble in water, and the impurities not so, its degree of strength may be measured by agitating it with a large proportion of warm water, say about 100 measures for one of the liquid. The residue undissolved will indicate the proportion of impurity, which should not exceed 30 per cent. by measure. It should not give an alkaline reaction with test-paper, and should not be soluble in less than 20 per cent. of water, thus indicating that it is not an alkaline solution of carbolic acid.

The coagulation of collodion, and the change of colour in pine wood, as mentioned under the pure acid, are tests applicable also to the impure.

Impure Carbolic Acid is to be used only as an external remedy, or for disinfecting purposes.

ACIDUM CHROMICUM. *Chromic Acid.*

In deep-red needleform crystals, deliquescent and very soluble in water, forming an orange-yellow solution. When heated to a temperature between 356° and 374°, it melts into a reddish-brown liquid, which, on cooling, becomes a red, opaque, brittle mass. If a few drops of alcohol are allowed to fall on a small portion of the acid, a vigorous action takes place, attended with an increase in bulk, and the liquid formed becomes yellowish-brown.

ACIDUM CITRICUM. *Citric Acid.*

In colourless crystals, wholly dissipated by a red heat, freely soluble in water, and soluble in alcohol. Its aqueous solution, neutralized with ammonia, produces with chloride of calcium a white precipitate, which is soluble in cold, but insoluble in boiling water. It affords with acetate of lead a precipitate wholly soluble in nitric acid, and yields no precipitate when added in excess to a solution of carbonate of potassium. One hundred grains of Citric Acid neutralize one hundred and fifty grains of bicarbonate of potassium.

ACIDUM LACTICUM. *Lactic Acid.*

A syrupy, nearly transparent liquid, of a pale-wine colour, having a slight, bland odour, and a very sour taste. Its specific gravity is 1.212. It unites in all proportions with water, alcohol, and ether. It is not precipitated by solution of acetate of lead, or of oxalate of ammonium; and, when neutralized with ammonia, affords no precipitate with hydrosulphuric acid. When gently heated it yields no odour of acetic or butyric acid. Ninety grains of Lactic Acid are neutralized by not less than seventy-

five grains of bicarbonate of potassium. When it is treated with a caustic alkali in excess, the colour is not materially deepened.

ACIDUM MURIATICUM. *Muriatic Acid.*

An aqueous solution of hydrochloric acid gas, of the specific gravity 1.160.

A colourless liquid, entirely volatilized by heat. When diluted with at least four times its bulk of distilled water, it yields no precipitate with hydrosulphuric acid, chloride of barium, or ammonia in excess, and does not dissolve gold-leaf, even with the aid of heat, except on the addition of nitric acid.

ACIDUM NITRICUM. *Nitric Acid.*

Nitric acid, of the specific gravity 1.420.

A colourless liquid, entirely volatilized by heat. It dissolves copper with the disengagement of red vapours, and, when diluted with at least six times its bulk of distilled water, yields no precipitate with hydrosulphuric acid, nitrate of silver, or chloride of barium.

ACIDUM OXALICUM. *Oxalic Acid.*

In small, colourless, prismatic crystals, having a strongly acid taste, fusible and decomposable by heat without residue. It is soluble in water, and its solution produces with lime-water a white precipitate, insoluble in excess of oxalic acid, or in acetic acid.

ACIDUM PHOSPHORICUM GLACIALE. *Glacial Phosphoric Acid.*

In colourless, transparent, glass-like masses, slowly deliquescent in the air, and soluble in water and in alcohol. Its aqueous solution is not precipitated by hydrosulphuric acid, and no precipitate takes place after the liquid has stood for forty-eight hours. Chloride of barium causes a white precipitate, which is readily dissolved by an excess of the acid. Ammonia in excess produces but a slight turbidness, and caustic potassa in excess evolves no ammonia.

ACIDUM SULPHURICUM. *Sulphuric Acid.*

Sulphuric acid, of the specific gravity 1.843.

A colourless, inodorous liquid, having an oily consistence. It is entirely volatilized by a strong heat, and, when diluted with distilled water, is not coloured by hydrosulphuric acid. Mixed with water, it evolves much heat, and throws down with solution of chloride of barium a copious precipitate, insoluble in nitric acid. It is not coloured by the addition of sulphate of iron.

ACIDUM TARTARICUM. *Tartaric Acid.*

In colourless crystals, wholly or almost wholly dissipated by heat, and readily soluble in water. The solution, added in excess to any neutral salt of potassium, produces a precipitate of bitartrate of potassium. With acetate of lead it yields a precipitate wholly soluble in nitric acid. One hundred grains of Tartaric Acid saturate one hundred and thirty-three and a half grains of bicarbonate of potassium.

ACIDUM VALERIANICUM. *Valerianic Acid.*

Valerianic Acid is a colourless liquid, of an oily consistence, a penetrating disagreeable odour, and caustic taste. Its specific gravity is 0.935. It is soluble in thirty parts of cold water, and, by agitation with a small quantity of that liquid, takes up about twenty per cent. of its weight, without losing its oily consistence. It mixes in all proportions with alcohol and ether. A solution of Valerianic Acid in fifty parts of hot water, saturated with hydrated carbonate of zinc, yields a liquid which, when filtered, and evaporated to ten parts and cooled, affords white pearly crystals of valerianate of zinc. The mother-water, drained from these crystals, should not yield, by further evaporation and cooling, a salt crystallizing in six-sided tables, and very soluble in water. When the Acid is added to a concentrated solution of acetate of copper, the transparency of the solution is not disturbed.

ACONITI FOLIA. *Aconite Leaves.* Ranunculaceae. Cornfoot Farm

Aconiti Folium, *Pharm.*, 1860.

The leaves of Aconitum Napellus.

ACONITI RADIX. *Aconite Root.* " "

The root of Aconitum Napellus.

ADEPS. *Lard.*

The prepared fat of Sus scrofa

Lard should be free from saline matter. Below the temperature of 90°, it is a soft solid.

ALCOHOL. *Alcohol.*

Spirit of the specific gravity 0.835.

Alcohol is colourless, is wholly vaporizable by heat, and unites in all proportions with water and ether. Diluted with twenty parts of distilled water, it should yield little or no foreign odour.

ALCOHOL AMYLICUM. *Amylic Alcohol.*

Syn. Fusel Oil.

A peculiar alcohol, obtained from fermented grain or potatoes, by continuing the process of distillation after the ordinary spirit has ceased to come over.

An oily, nearly colourless liquid, having a strong, offensive odour, and an acrid, burning taste. Its specific gravity is 0.818, and its boiling point between 268° and 272°. It is sparingly soluble in water, but unites in all proportions with alcohol and ether. It does not take fire by contact with flame, and, when dropped on paper, does not leave a permanent greasy stain. Exposed to the air in contact with platinum black, it is slowly oxidized, yielding valerianic acid.

ALCOHOL DILUTUM. *Diluted Alcohol.*

Alcohol mixed with an equal measure of Distilled Water.

The specific gravity of Diluted Alcohol is 0.941.

ALCOHOL FORTIUS. *Stronger Alcohol.*

Spirit, of the specific gravity 0.817.

Stronger Alcohol, treated with a few drops of solution of nitrate of silver and exposed to a bright light, either remains unchanged, or lets fall a very scanty, dark precipitate. Its other properties correspond with those of officinal alcohol.

ALLIUM. *Garlic.* Liliaceæ. Lily Family

The bulb of Allium sativum.

ALOE BARBADENSIS. *Barbadoes Aloes.* Liliaceæ

The inspissated juice of the leaves of Aloe vulgaris (*Lamarck*).

ALOE CAPENSIS. *Cape Aloes.* //

The inspissated juice of the leaves of Aloe spicata (*Thunberg*), and of other species of Aloe.

ALOE SOCOTRINA. *Socotrine Aloes.* //

The inspissated juice of the leaves of Aloe Socotrina (*Lamarck*).

ALTHÆA. *Marshmallow.* Malvaceæ

The root of Althæa officinalis. Mallow Family

ALUMEN. *Alum.*

Aluminæ et Ammoniæ Sulphas, *Pharm.*, 1860.

Sulphate of aluminium and ammonium.

Syn. Ammonia-alum.

When Alum is triturated with hydrate of calcium or carbonate of sodium, it yields the odour of ammonia.

ALUMINII ET POTASSII SULPHAS. *Sulphate of Aluminium and Potassium.*

Alumen, *Pharm.*, 1860.

Syn. Potassa-alum.

AMMONIACUM. *Ammoniac.* Pentandria Digynia.

A gum-resinous exudation from Dorema Ammoniacum (Don, *Trans. of the Linn. Soc.*).

AMMONII CARBONAS. *Carbonate of Ammonium.*

In white, translucent masses, having a pungent ammoniacal odour free from empyreuma. It is wholly dissipated by heat, and soluble without residue in water. On exposure to the air, it becomes opaque, falls into powder, and deteriorates by the loss of ammonia. When it is saturated with nitric acid, neither chloride of barium nor nitrate of silver causes a precipitate.

AMMONII CHLORIDUM. *Chloride of Ammonium.*

Ammoniæ Murias, *Pharm.*, 1860.

Syn. Muriate of Ammonia.

In translucent masses, entirely volatilized by heat, and wholly soluble in water. The solution slightly reddens litmus, and gives no precipitate with chloride of barium. The salt, when rubbed with hydrate of calcium or hydrate of potassium, emits the smell of ammonia.

AMMONII NITRAS. *Nitrate of Ammonium.*

A white, deliquescent, crystalline salt, occurring in long, prismatic crystals, or in fused masses; soluble in about half its weight of water at 70°, more so in boiling water, and soluble in twice its weight of alcohol. It affords no precipitate with chloride of barium, or nitrate of silver; when mixed with sulphuric acid, it evolves nitric acid vapour; subjected to a heat of 400° to 450°, in a glass retort, it is entirely volatilized into nitrous oxide gas, and watery vapour.

AMMONII SULPHAS. *Sulphate of Ammonium.*

In colourless, prismatic crystals, freely soluble in water, and decomposed and totally dissipated by a red heat. When rubbed with hydrate of calcium or hydrate of potassium, the salt emits the smell of ammonia. Its solution yields a white precipitate

with chloride of barium. In dilute solution it is scarcely precipitated by nitrate of silver.

AMYGDALA AMARA. *Bitter Almond.* Amygdalae

The kernel of the fruit of Amygdalus communis, variety amara (*De Candolle*).

AMYGDALA DULCIS. *Sweet Almond.* //

The kernel of the fruit of Amygdalus communis, variety dulcis (*De Candolle*).

AMYLUM. *Starch.* Gramineae Grass Family.

The fecula of the seed of Triticum vulgare (Kunth, *Gramineæ*, 438).

ANGUSTURA. *Angustura.* Rutaceae

The bark of Galipea officinalis (Hancock, *Trans. of the Medico-Bot. Soc.*).

ANISUM. *Anise.* Umbelliferae

The fruit of Pimpinella Anisum.

ANTHEMIS. *Chamomile.* Compositae

The flowers of Anthemis nobilis.

ANTIMONII SULPHURETUM. *Sulphuret of Antimony.*

Native tersulphuret of antimony, purified by fusion.

Sulphuret of Antimony is wholly dissolved by muriatic acid with the aid of heat, hydrosulphuric acid gas being evolved. The solution yields a white precipitate when added to water; and the resulting liquid, after filtration, affords an orange-red precipitate with hydrosulphate of ammonium.

AQUA. *Water.*

Natural water in the purest attainable state.

For signs of the purity of Water, see *Aqua Destillata.*

AQUA AMMONIÆ FORTIOR. *Stronger Water of Ammonia.*

An aqueous solution of ammonia, of the specific gravity 0.900, containing twenty-six per cent. by weight of the gas.

Stronger Water of Ammonia has a very pungent odour of ammonia, is wholly volatilized by heat, and gives no precipitate with lime-water. It does not effervesce on the addition of dilute nitric acid, and, when neutralized with that acid, does not yield a precipitate with carbonate of ammonium, nitrate of silver, or chloride of barium.

ARGENTUM. *Silver.*

A white metal, having the specific gravity 10.4. It is entirely dissolved by dilute nitric acid; and the solution yields with chloride of sodium a white precipitate, wholly soluble in ammonia. The solution, deprived of silver by means of chloride of sodium, and filtered, is not coloured, or but slightly so, and is not precipitated by hydrosulphuric acid.

ARNICA. *Arnica.* Compositae

The flowers of Arnica montana.

ARSENICUM. *Arsenic.*

A brittle metal, usually of a dark hue, but exhibiting a steel-gray colour and brilliant lustre when recently broken or sublimed. Its specific gravity is 5.88. When exposed to heat in the open air it sublimes without melting, giving rise to white vapours having a garlicky smell.

ASSAFŒTIDA. *Assafetida.* Umbelliferae

A gum-resinous exudation, obtained by incision, from the root of Narthex Assafœtida (Falconer, *Royle's Mat. Med.*).

AURANTII AMARI CORTEX. *Bitter Orange Peel.* Aurantiaceae

The rind of the fruit of Citrus vulgaris.

AURANTII DULCIS CORTEX. *Sweet Orange Peel.* Aurantiaceæ

The rind of the fruit of Citrus Aurantium.

AURANTII FLORES. *Orange Flowers.* //

The flowers of Citrus Aurantium, and of Citrus vulgaris.

AVENÆ FARINA. *Oatmeal.* Graminaceæ

The meal prepared from the seed of Avena sativa.

BALSAMUM PERUVIANUM. *Balsam of Peru.* Leguminosæ

An empyreumatic liquid balsam obtained from Myrospermum Peruiferum (*De Candolle*).

BALSAMUM TOLUTANUM. *Balsam of Tolu.* //

A semi-liquid balsam obtained from Myrospermum Toluiferum (*De Candolle*).

BARII CARBONAS. *Carbonate of Barium.*

Entirely soluble in dilute muriatic acid, with effervescence. The solution formed is not coloured nor precipitated by ammonia or hydrosulphuric acid. When sulphuric acid is added in excess, the solution yields no precipitate with carbonate of sodium.

BELLADONNÆ FOLIA. *Belladonna Leaves.* Solanaceæ

Belladonnæ Folium, *Pharm.*, 1860.

The leaves of Atropa Belladonna.

BELLADONNÆ RADIX. *Belladonna Root.* //

The root of Atropa Belladonna from plants more than two years old.

BENZOINUM. *Benzoin.* Styraceæ

A solid balsam obtained from Styrax Benzoin.

BISMUTHUM. *Bismuth.*

Commercial bismuth of good quality.

A brittle crystalline metal, having a white colour with a reddish tint, and possessing considerable lustre. Its specific gravity is 9.8, and its melting point 507°. It dissolves readily and almost entirely in moderately strong nitric acid, forming a solution, which, when added to distilled water, gives rise to a white precipitate.

Bismuth, as met with in commerce, usually contains a small proportion of arsenic, copper, and silver.

BROMINIUM. *Bromine.*

A dark-red liquid, having a strong, disagreeable odour. It is entirely volatilized by heat into reddish vapour. It boils at 117°. Its specific gravity is 3. It is sparingly soluble in water, more soluble in alcohol, and still more so in ether. It destroys the colour of sulphate of indigo, and renders starch yellow.

BUCHU. *Buchu.* Rutaceæ

The leaves of Barosma crenata, and of other species of Barosma.

CADMIUM. *Cadmium.*

A malleable metal, nearly as volatile as mercury, and of a tin-white colour. Its specific gravity is 8.7. It dissolves readily in nitric acid, forming a colourless solution, which yields, with hydrosulphate of ammonium, a lemon-yellow precipitate, insoluble in a solution of potassa, and not volatile at a red heat. Its neutral solution in nitric acid, after having been fully precipitated by carbonate of sodium added in slight excess, yields a filtrate which is not affected by hydrosulphate of ammonium

CAFFEA. *Coffee.* Cinchonaceæ

The seed of Coffea Arabica.

CALCII CHLORIDUM. *Chloride of Calcium.*

Chloride of calcium prepared by fusion.

In colourless, slightly translucent masses, hard and friable, deliquescent, and entirely soluble in water. The solution yields white precipitates with nitrate of silver and oxalate of ammonium, and no precipitate with ammonia, with chloride of barium, or with ferrocyanide of potassium dissolved in a large quantity of water.

CALCII HYPOPHOSPHIS. *Hypophosphite of Calcium.*

A white, crystalline salt, having a pearly lustre, and a nauseous bitter taste. It is soluble in six parts of cold, and not much less of hot water. Its solubility is increased by hypophosphorous acid. It is insoluble in alcohol, and very sparingly soluble in diluted alcohol. It does not lose any water at 300°, but when heated to redness, it decrepitates, gives off water, and evolves spontaneously-inflammable phosphoretted hydrogen gas, leaving a reddish residue which amounts to about eighty per cent.

CALUMBA. *Columbo.* Menispermaceæ

The root of Jateorrhiza palmata (Miers), Cocculus palmatus (De Candolle); and of Jateorrhiza Calumba (Miers), Cocculus palmatus (Wallich, *Catal. non D.C.*).

CALX. *Lime.*

Lime recently prepared by calcination.

Upon the addition of water, Lime cracks and falls into powder with the evolution of heat. Muriatic acid dissolves it without effervescence, and the solution yields no precipitate with ammonia.

CALX CHLORINATA. *Chlorinated Lime.*

Syn. Chloride of Lime.

A compound resulting from the action of chlorine on hydrate of calcium, and containing at least twenty-five per cent. of chlorine.

A grayish-white substance, in powder or friable lumps, dry, or

but slightly moist, and wholly dissolved by dilute muriatic acid with the escape of chlorine. Its solution quickly destroys vegetable colours. When forty grains of it, triturated with a fluidounce of distilled water, are well shaken with a solution of seventy-eight grains of crystallized sulphate of protoxide of iron and ten drops of sulphuric acid in two fluidounces of distilled water, a liquid is formed which does not yield a blue precipitate with ferridcyanide of potassium.

CAMPHORA. *Camphor.* Lauraceæ

A peculiar concrete substance derived from Camphora officinarum (Nees, *Laurin.*, 88), and purified by sublimation.

CANELLA. *Canella.* Meliaceæ

The bark of Canella alba.

CANNA. *Canna.* Marantaceæ

Syn. Tous les Mois.

The fecula prepared from the rhizome of an undetermined species of Canna.

CANNABIS AMERICANA. *American Hemp.* Cannabinaceæ

The flowering tops of Cannabis sativa, cultivated in North America.

CANNABIS INDICA. *Indian Hemp.*

The flowering tops of the female plant of Cannabis sativa, variety Indica.

CANTHARIS. *Cantharides.* Coleoptera

Cantharis vesicatoria. Lytta vesicatoria (Fabricius).

CAPSICUM. *Capsicum.* Solanaceæ

Syn. Cayenne and African Pepper.

The fruit of Capsicum annuum, Capsicum fastigiatum (Blum), and of other species of Capsicum.

CARBO ANIMALIS. *Animal Charcoal.*

Charcoal prepared from bone.

CARBO LIGNI. *Charcoal.*

Charcoal prepared from wood.

CARDAMOMUM. *Cardamom.* Zingiberaceae

The fruit of Elettaria Cardamomum (Maton, *Act. Linn.*, 254).

CARUM. *Caraway.* Umbelliferae

The fruit of Carum Carui.

CARYOPHYLLUS. *Cloves.* Myrtaceae

The unexpanded flowers of Caryophyllus aromaticus (*De Candolle*).

CASCARILLA. *Cascarilla.* Euphorbiaceae

The bark of Croton Eluteria (Bennett, *Journ. Proceed. of Linn. Soc.*).

CASSIA FISTULA. *Purging Cassia.* Leguminosae

The fruit of Cassia fistula.

CASSIA MARILANDICA. *American Senna.* //

The leaflets of Cassia Marilandica.

CASTOREUM. *Castor.*

A peculiar concrete substance obtained from Castor fiber.

CATARIA. *Catnep.* Labiatae

The leaves and tops of Nepeta Cataria.

CATECHU. *Catechu.* Leguminosae

An extract prepared principally from the wood of Acacia Catechu.

CERA ALBA. *White Wax.*

Yellow wax, bleached.

CERA FLAVA. *Yellow Wax.*

A peculiar concrete substance prepared by Apis mellifica.

CERII OXALAS. *Oxalate of Cerium.*

A white powder, insoluble in water, alcohol, and ether, but soluble in sulphuric acid; the solution mixed with chloride of ammonium, yields a precipitate with caustic potassa, which is insoluble in an excess of the precipitant. Exposed to heat the salt is decomposed and ultimately leaves a black powder, which, in contact with the air, burns to yellow peroxide of cerium.

CETACEUM. *Spermaceti.*

A peculiar concrete substance obtained from Physeter macrocephalus.

CETRARIA. *Iceland Moss.*

Cetraria Islandica (Acharius, *Lichenog. Univ.*).

CHENOPODIUM. *Wormseed.* Chenopodiaceæ

The fruit of Chenopodium anthelminticum.

CHIMAPHILA. *Pipsissewa.* Ericaceæ

The leaves of Chimaphila umbellata (Pursh, *Flor. Amer. Sept.*).

CHIRETTA. *Chiretta.*

Agathotes Chirayta (Don).

CHLORAL. *Chloral.*

Syn. Hydrate of Chloral.

A white crystalline mass having a pungent odour and taste, soluble in its own weight of distilled water, and readily soluble in alcohol. When heated it fuses and evaporates without residue, and in the open air without combustion. The aqueous solution

is not precipitated by nitrate of silver, and when mixed with an equal bulk of nitric acid and heated, no red vapours are evolved. The solution acidulated with sulphuric acid and faintly tinged with permanganate of potassium is not decolourized within three hours. The crystals float on sulphuric acid, and when the two are agitated together, the acid becomes temporarily turbid, but remains colourless after being heated.

CHLOROFORMUM VENALE. *Commercial Chloroform.*

A colourless liquid, varying in specific gravity from 1.45 to 1.49. Shaken with an equal volume of officinal sulphuric acid in a bottle closed with a glass stopper, it forms a mixture, which separates by rest into two layers; the upper one colourless, and the lower, consisting of the acid, of a brownish hue, which, after the lapse of twenty-four hours, becomes darker, but never quite black.

CHONDRUS. *Irish Moss.*

Chondrus crispus (Greville, *Alg. Brit.*).

CIMICIFUGA. *Cimicifuga.* Ranunculaceae

Syn. Black Snakeroot.

The root of Cimicifuga racemosa (Torrey and Gray, *Flor. of N. Amer.*).

CINCHONA. *Cinchona.* Cinchonaceae

The bark of all species of the genus Cinchona, containing at least two per cent. of the proper cinchona alkaloids, which yield crystallizable salts.

CINCHONA FLAVA. *Yellow Cinchona.* //

Syn. Calisaya Bark.

The bark of Cinchona calisaya (Weddell, *Hist. Nat. des Quinquin.*, 30). It should contain not less than two per cent. of alkaloids which yield crystallizable salts.

CINCHONA PALLIDA. *Pale Cinchona.*

The bark of Cinchona Condaminea (Humb. and Bonpl., *Plant. Equinoct.*, i. 33), and of Cinchona micrantha (Ruiz and Pavon, *Flor. Peruv.*, ii. 52).

CINCHONA RUBRA. *Red Cinchona.*

Syn. Red Bark.

The bark of Cinchona succirubra (Pavon). It should contain not less than two per cent. of alkaloids which yield crystallizable salts.

CINNAMOMUM. *Cinnamon.*

The prepared bark of Cinnamomum Zeylanicum (Nees, *Laurin.*), and of Cinnamomum aromaticum (Nees, *ibid.*).

COCCUS. *Cochineal.*

The female of Coccus cacti.

COLCHICI RADIX. *Colchicum Root.*

The corm of Colchicum autumnale.

COLCHICI SEMEN. *Colchicum Seed.*

The seed of Colchicum autumnale.

COLOCYNTHIS. *Colocynth.*

The fruit, deprived of its rind, of Citrullus Colocynthis (Royle, *Mat. Med.*).

CONII FOLIA. *Conium Leaves.*

Conium, *Pharm.*, 1860.

Syn. Hemlock Leaves.

The leaves of Conium maculatum.

CONII FRUCTUS. *Conium Seed.*

The full-grown fruit of Conium maculatum, gathered while yet green, and carefully dried.

Leguminosae

COPAIBA. *Copaiba.*

The oleo-resin of Copaifera multijuga (Hayne), and of other species of Copaifera.

Ranunculaceae

COPTIS. *Goldthread.*

Coptis trifolia.

Umbelliferae

CORIANDRUM. *Coriander.*

The fruit of Coriandrum sativum.

Cornaceae

CORNUS FLORIDA. *Dogwood.*

The bark of Cornus Florida.

CREASOTUM. *Creasote.*

A peculiar substance obtained from wood-tar.

A colourless, oily, neuter liquid, having a strong, characteristic odour, and an acrid, burning taste. Its specific gravity is 1.046. When dropped on filtering paper, it causes a greasy stain, which wholly disappears, in ten minutes, upon being exposed to a heat of about 212°. It boils without alteration at 397°, and does not congeal at 17° below zero. It is sparingly soluble in water, but mixes in all proportions with alcohol and ether. It dissolves wholly and readily in an equal volume of acetic acid. It is distinguished from carbolic acid, which it in some respects closely resembles, by not coagulating collodion when mixed with it, and by not imparting a blue colour to a slip of pine wood dipped first into an alkaline solution of creasote, and then, after drying, into muriatic acid.

CRETA. *Chalk.*

Native, friable carbonate of calcium.

Chalk is entirely soluble in dilute muriatic acid with effervescence, and the solution yields no precipitate with ammonia.

Iridaceae

CROCUS. *Saffron.*

The stigmas of Crocus sativus.

CUBEBA. *Cubeb.*

The unripe fruit of Cubeba officinalis (Miquel), Piper cubeba (Linn.).

CUPRI SUBACETAS *Subacetate of Copper.*

Syn. Verdigris.

Impure subacetate of copper.

In masses of a pale-green colour, almost wholly soluble in dilute sulphuric acid, with the aid of heat. Ammonia, added to the solution, produces a precipitate, which is entirely dissolved by an excess of the alkali.

CUPRI SULPHAS. *Sulphate of Copper.*

In blue crystals, slightly efflorescent in the air, and entirely soluble in water. Ammonia throws down from the solution a precipitate, which is wholly dissolved when the alkali is added in excess.

CUPRUM. *Copper.*

Copper wire.

DIGITALIS. *Digitalis.* Scrophulariaceae

The leaves of Digitalis purpurea, from plants of the second year's growth.

DULCAMARA. *Bittersweet.* Solanaceae

The young branches of Solanum dulcamara.

ELATERIUM. *Elaterium.*

A substance deposited by the juice of the fruit of Momordica elaterium, Ecbalium agreste (*Richard*).

ERGOTA. *Ergot.*

The sclerotium of Claviceps purpurea (Tulasne), replacing the grain of Secale cereale.

ERIGERON. *Erigeron.* Compositae

Syn. Fleabane.

The leaves and tops of Erigeron heterophyllum, and of Erigeron Philadelphicum.

ERIGERON CANADENSE. *Canada Erigeron.* //

Syn. Canada Fleabane.

The leaves and tops of Erigeron Canadense.

EUPATORIUM. *Thoroughwort.* //

The leaves and tops of Eupatorium perfoliatum, gathered after flowering has commenced.

EXTRACTUM GLYCYRRHIZÆ. *Liquorice.* Leguminosae

The extract of the root of Glycyrrhiza glabra.

FERMENTUM. *Yeast.*

A peculiar insoluble product of the fermentation of malt liquors.

FERRI HYPOPHOSPHIS. *Hypophosphite of Iron.*

A white amorphous powder, insoluble in cold water, soluble in hydrochloric acid, and when dry sparingly soluble in hypophosphorous acid, but in the moist hydrated condition readily soluble. With solution of potassa it becomes reddish-brown. Heated, it evolves spontaneously-inflammable phosphoretted hydrogen.

FERRI SULPHURETUM. *Sulphuret of Iron.*

Protosulphuret of iron, prepared by melting together sublimed sulphur and iron in small pieces.

FERRUM. *Iron.*

A malleable and very ductile metal, having the specific gravity 7.8. It has a fibrous texture, and requires a high heat for its fusion. The wire drawn from it is flexible and without elasticity.

FICUS. *Fig.*

The dried fruit of Ficus Carica.

FILIX MAS. *Male Fern.*

The rhizome covered with portions of the stipes of Aspidium filix mas.

When used, only such part of the rhizome as has retained its green colour should be employed; and the stipes, being inert, should be removed.

FŒNICULUM. *Fennel.* Umbelliferae

The fruit of Fœniculum dulce (*De Candolle*).

GALBANUM. *Galbanum.*

The gum-resin of an undetermined plant.

GALLA. *Nutgall.*

A morbid excrescence upon Quercus infectoria.

GAMBOGIA. *Gamboge.*

A gum-resin derived from Garcinia morella (Desrousseaux), var. pedicellata.

GAULTHERIA. *Gaultheria.* Ericaceae

The leaves of Gaultheria procumbens.

GELSEMIUM. *Yellow Jasmine.* Loganiaceae

The root of Gelsemium sempervirens (Gray, *Manual of Botany*).

GENTIANA. *Gentian.* Gentianaceae

The root of Gentiana lutea.

GERANIUM. *Geranium.* Geraniaceae

Syn. Cranesbill.

The rhizome of Geranium maculatum.

GLYCERINA. *Glycerin.*

A colourless, inodorous, syrupy liquid, of a sweet taste, and having the specific gravity 1.25. It is soluble in water and in alcohol, but not in ether. Exposed to a full red heat, it takes fire, and burns with a blue flame. It is destroyed by distillation in contact with air, but may be distilled unchanged with steam. It combines with potassa and baryta, and also with sulphuric acid. When mixed with twice its bulk of cold sulphuric acid, it does not produce a brown colour. When diluted with water, it affords no precipitate with hydrosulphate of ammonium, ferrocyanide of potassium, nitrate of barium, oxalate of ammonium, or nitrate of silver.

GLYCYRRHIZA. *Liquorice Root.* Leguminosae

The root of Glycyrrhiza glabra.

GOSSYPIUM. *Cotton.* Malvaceae

A filamentous substance separated from the seed of Gossypium herbaceum, and of other species of Gossypium.

GOSSYPII RADICIS CORTEX. *Bark of Cotton Root.*

The bark of the root of Gossypium herbaceum, and of other species of Gossypium.

GRANATI FRUCTÛS CORTEX. *Pomegranate Rind.*

The rind of the fruit of Punica Granatum.

GRANATI RADICIS CORTEX. *Bark of Pomegranate Root.*

The bark of the root of Punica Granatum.

GUAIACI LIGNUM. *Guaiacum Wood.*

The heart wood of Guaiacum officinale.

GUAIACI RESINA. *Guaiac.*

A peculiar resin obtained from Guaiacum officinale,

by spontaneous exudation, by incision, by dry heat, or by decoction of the comminuted wood.

GUTTA-PERCHA. *Gutta-percha.*

The concrete juice of Isonandra gutta (Hooker, *Loudon's Journal of Botany*, 1848).

HÆMATOXYLON. *Logwood.* Leguminosæ

The heart-wood of Hæmatoxylon Campechianum.

HEDEOMA. *Hedeoma.* Labiatæ

Syn. American Pennyroyal.

The leaves and tops of Hedeoma Pulegioides.

HELLEBORUS. *Black Hellebore.* Ranunculaceæ

The root of Helleborus niger.

HORDEUM. *Barley.* Gramineæ

The decorticated seed of Hordeum distichon.

HUMULUS. *Hops.* Urticaceæ

The strobiles of Humulus Lupulus.

HYDRARGYRUM. *Mercury.*

A silver-white metal, liquid at common temperatures, and having the specific gravity 13.5. It is wholly volatilized by heat, and is dissolved without residue by nitric acid. A globule made to roll over white paper occasions no trace. Pure sulphuric acid, agitated with it and afterwards evaporated, leaves no residue.

HYDRASTIS. *Hydrastis.* Ranunculaceæ

The root of Hydrastis Canadensis.

HYOSCYAMI FOLIA. *Hyoscyamus Leaves.* Solanaceæ

Hyoscyami Folium, *Pharm.*, 1860.

The leaves of Hyoscyamus niger.

HYOSCYAMI SEMEN. *Hyoscyamus Seed.* Solanaceæ

The seed of Hyoscyamus niger.

ICHTHYOCOLLA. *Isinglass.*

The swimming bladder of Acipenser Huso, and of other fishes.

IGNATIA. *Ignatia.*

Syn. Bean of St. Ignatius.

The seed of Strychnos Ignatia (Lindley, *Flor. Med.*).

IODINIUM. *Iodine.*

In bluish-black, crystalline scales having the metallic lustre. Its specific gravity is 4.9. When heated it first melts, and then rises in purple vapour. It is very slightly soluble in water, but freely so in alcohol and ether. Shaken with distilled water, it should communicate only a light-brown tinge. With starch in cold solution it produces a blue colour. When shaken in a dry glass bottle, it scarcely adheres to the surface.

IODOFORMUM. *Iodoform.*

In yellow scaly crystals having the odour of saffron. It is insoluble in water, but soluble in alcohol, ether, and the fixed and volatile oils. By a heat above 250° it is decomposed, giving off violet vapours.

IPECACUANHA. *Ipecacuanha.* Cinchonaceæ

The root of Cephaelis Ipecacuanha (*De Candolle*).

JALAPA. *Jalap.* Convolvulaceæ

The tuber of Exogonium purga (Bentham, *Botanical Register*), Ipomœa Jalapa (*Nuttall*).

JUGLANS. *Butternut.* Juglandaceæ

The inner bark of the root of Juglans cinerea.

JUNIPERUS. *Juniper.* Coniferæ

The fruit of Juniperus communis.

KINO. *Kino.*

The inspissated juice of Pterocarpus Marsupium (*De Candolle*), and of other plants.

KRAMERIA. *Rhatany.*

The root of Krameria triandra (*De Candolle*).

LACTUCARIUM. *Lactucarium.* Compositae

The concrete juice obtained from Lactuca sativa, by incision and spontaneous evaporation.

LAVANDULA. *Lavender.*

The flowers of Lavandula vera (*De Candolle*).

LEPTANDRA. *Leptandra.* Scrophulariaceae

The root of Leptandra Virginica (*Nuttall*).

LIMONIS CORTEX. *Lemon Peel.*

The rind of the fruit of Citrus Limonum (*De Candolle*).

LIMONIS SUCCUS. *Lemon Juice.*

The juice of the fruit of Citrus Limonum (*De Candolle*).

LINI FARINA. *Flaxseed Meal.*

The meal prepared from the seed of Linum usitatissimum.

LINUM. *Flaxseed.* Linaceae

The seed of Linum usitatissimum.

LITHII CARBONAS. *Carbonate of Lithium.*

A white powder, sparingly soluble in water, and having a feeble alkaline reaction. It dissolves with effervescence in dilute sulphuric acid, and forms a freely soluble salt. It imparts to the flame of burning alcohol a carmine-red colour.

LOBELIA. *Lobelia.* Lobeliaceae

The leaves and tops of Lobelia inflata.

LUPULINA. *Lupulin.* Urticaceae

The yellow powder separated from the strobiles of Humulus Lupulus.

LYCOPODIUM. *Lycopodium.* Lycopodiaceae

The sporules of Lycopodium clavatum, and of other species of Lycopodium.

MACIS. *Mace.*

The arillus of the fruit of Myristica fragrans (Houttuyn, *Nat. Hist.*).

MAGNESII CARBONAS. *Carbonate of Magnesium.*

A white substance in powder or pulverulent masses, wholly dissolved by dilute sulphuric acid, forming a solution which does not afford a precipitate with oxalate of ammonium. Distilled water which has been boiled with it does not change the colour of turmeric, and yields no precipitate with chloride of barium or nitrate of silver.

MAGNESII SULPHAS. *Sulphate of Magnesium.*

In colourless crystals, which slowly effloresce on exposure to the air, and are very soluble in water. The solution is not coloured nor precipitated by ferrocyanide of potassium, and gives off no muriatic acid upon the addition of sulphuric acid. One hundred grains of the salt, dissolved in water, and mixed with sufficient boiling solution of carbonate of sodium to be completely decomposed, yield a precipitate of carbonate of magnesium, which, when washed and dried, weighs thirty-four grains.

MANGANESII OXIDUM NIGRUM. *Black Oxide of Manganese.*

Native impure deutoxide of manganese in powder.

This Oxide should contain at least sixty-six per cent. of deut-

oxide of manganese, and should exhibit little or no effervescence on the addition of dilute sulphuric acid.

MANGANESII SULPHAS. *Sulphate of Manganese.*

In colourless, or pale rose-coloured, transparent crystals, which, when deposited from a solution at a temperature between 68° and 86°, have the form of right rhombic prisms, and contain four equivalents of water. This salt is very soluble in water. The solution is not disturbed by tincture of nutgall, but affords with caustic alkalies a white precipitate, which soon becomes brown by exposure to the air. Hydrosulphate of ammonium throws down a flesh-coloured precipitate, and ferrocyanide of potassium, a white one.

MANNA. *Manna.* Oleaceae

The concrete saccharine exudation, in flakes, of Fraxinus Ornus, and of Fraxinus rotundifolia.

MARANTA. *Arrow-root.* Marantaceae

The fecula of the rhizome of Maranta arundinacea.

MARMOR. *Marble.*

Native, white, granular carbonate of calcium.

Marble is wholly dissolved by dilute muriatic acid with effervescence; and the solution yields no precipitate with ammonia, or with an aqueous solution of sulphate of calcium.

MARRUBIUM. *Horehound.* Labiatae

The leaves and tops of Marrubium vulgare.

MASTICHE. *Mastic.*

The concrete resinous exudation from Pistacia Lentiscus.

MATICO. *Matico.*

The leaves of Artanthe elongata (*Miquel*).

MATRICARIA. *German Chamomile.*

The flowers of Matricaria Chamomilla.

MEL. *Honey.*

A saccharine liquid prepared by Apis mellifica.

MENTHA PIPERITA. *Peppermint.*

The leaves and tops of Mentha piperita.

MENTHA VIRIDIS. *Spearmint.*

The leaves and tops of Mentha viridis.

MEZEREUM. *Mezereon.*

The bark of Daphne Mezereum, and of Daphne Gnidium.

MONARDA. *Horsemint.*

The leaves and tops of Monarda punctata.

MOSCHUS. *Musk.*

A peculiar concrete secretion obtained from Moschus Moschiferus.

MYRISTICA. *Nutmeg.*

The kernel of the fruit of Myristica fragrans (Houttuyn, *Nat. Hist.*).

MYRRHA. *Myrrh.*

A gum-resinous exudation from Balsamodendron Myrrha (Nees, *Beschreib. Officinel. Pflanzen*).

NECTANDRA. *Nectandra.*

Syn. Bebeeru Bark.

The bark of Nectandra Rodiei (*Schomburgk*).

NUX VOMICA. *Nux Vomica.*

The seed of Strychnos Nux vomica.

OLEUM AMYGDALÆ AMARÆ. *Oil of Bitter Almond*

The volatile oil obtained from the kernel of the fruit of Amygdalus communis, variety amara (*De Candolle*).

Soluble in nitric acid at ordinary temperatures, without the evolution of nitrous acid fumes. When fifteen grains of potassa are added to a solution of fifteen minims of the Oil in two fluidrachms of alcohol, and the mixture is heated until the potassa is dissolved, and the solution is reduced by evaporation to about one-third of its original bulk, the resulting liquid has a brownish-yellow colour, and deposits no crystals upon standing for an hour in a cool place.

OLEUM AMYGDALÆ EXPRESSUM. *Expressed Oil of Almond.*

Oleum Amygdalæ Dulcis, *Pharm.*, 1860.

The fixed oil obtained from the kernel of the fruit of Amygdalus communis (*De Candolle*).

OLEUM BERGAMII. *Oil of Bergamot.*

The volatile oil obtained from the rind of the fruit of Citrus Limetta (*De Candolle*).

OLEUM CAJUPUTI. *Oil of Cajeput.*

The volatile oil obtained from the leaves of Melaleuca Cajuputi (Roxburgh, *Trans. Lond. Medico-Bot. Soc.*).

OLEUM CAMPHORÆ. *Oil of Camphor.*

The volatile oil obtained from Camphora officinarum (Nees, *Laurin.*, 88).

OLEUM CINNAMOMI. *Oil of Cinnamon.*

Syn. Oil of Ceylon Cinnamon.

The volatile oil obtained from the bark of Cinnamomum Zeylanicum (Nees, *Laurin.*).

OLEUM LIMONIS. *Oil of Lemon.*

The volatile oil obtained from the rind of the fruit of Citrus Limonum (*De Candolle*).

OLEUM LINI. *Flaxseed Oil.*

The fixed oil obtained from the seed of Linum usitatissimum.

OLEUM MORRHUÆ. *Cod-liver Oil.*

The fixed oil obtained from the liver of Gadus Morrhua, and of other species of Gadus.

OLEUM MYRISTICÆ. *Oil of Nutmeg.*

The volatile oil obtained from the kernels of the fruit of Myristica fragrans (Houttuyn, *Nat. Hist.*).

OLEUM OLIVÆ. *Olive Oil.*

The fixed oil obtained from the fruit of Olea Europæa.

OLEUM RICINI. *Castor Oil.*

The fixed oil obtained from the seed of Ricinus communis.

OLEUM ROSÆ. *Oil of Rose.*

The volatile oil obtained from the petals of Rosa centifolia.

OLEUM SUCCINI. *Oil of Amber.*

The volatile oil obtained by the destructive distillation of amber.

OLEUM TEREBINTHINÆ. *Oil of Turpentine.*

The volatile oil distilled from the turpentine of Pinus palustris, and of other species of Pinus.

OLEUM THEOBROMÆ. *Oil of Theobroma.*

Syn. Butter of Cacao.

The concrete oil of the kernels of the fruit of Theobroma Cacao.

OLEUM THYMI. *Oil of Thyme.*

The volatile oil obtained from Thymus vulgaris.

OLEUM TIGLII. *Croton Oil.*

The fixed oil obtained from the seed of Croton Tiglium.

OPIUM. *Opium.* Papaveraceae

The concrete juice obtained from the unripe capsules of Papaver somniferum, by incision and spontaneous evaporation.

Opium, when dried at 212° until it ceases to lose weight, should yield at least ten per cent. of morphia by the officinal process.

ORIGANUM. *Origanum.* Labiatae

The herb of Origanum vulgare.

OS. *Bone.*

OVUM. *Egg.*

The egg of Phasianus Gallus.

PAPAVER. *Poppy.* Papaveraceae

The nearly ripe capsules of Papaver somniferum.

PAREIRA. *Pareira Brava.* Menispermaceae

The root of Cissampelos Pareira.

PEPO. *Pumpkin Seed.* Cucurbitaceae

The seed of Cucurbita Pepo.

PHOSPHORUS. *Phosphorus.*

A translucent, nearly colourless solid, resembling wax, without taste, but having a peculiar smell. Its specific gravity is 1.8. It is extremely inflammable, and should be kept under water, and protected from the light. When exposed to the air it emits white fumes, which are luminous in the dark.

PHYSOSTIGMA. *Calabar Bean.*

The seed of Physostigma venenosum (*Balfour*).

PIMENTA. *Pimento.*

Syn. Allspice.

The unripe berries of Eugenia Pimenta (*De Candolle*).

PIPER. *Black Pepper.*

The unripe berries of Piper nigrum.

PIX BURGUNDICA. *Burgundy Pitch.*

The prepared resinous exudation from Abies excelsa (Lamarck, *Encyc. Méthod.*).

PIX CANADENSIS. *Canada Pitch.*

Syn. Hemlock Pitch.

The prepared resinous exudation from Abies Canadensis (Michaux, *N. Am. Sylva*).

PIX LIQUIDA. *Tar.*

The impure turpentine from the wood of Pinus palustris, and of other species of Pinus, procured by burning.

PLUMBI ACETAS. *Acetate of Lead.*

Syn. Sugar of Lead.

In colourless crystals, which effloresce on exposure to the air. It is dissolved by distilled water, with a slight turbidness, which is removed by the addition of distilled vinegar. With its solution, carbonate of sodium produces a white, iodide of potassium a yellow, and hydrosulphuric acid a black precipitate. Upon the addition of sulphuric acid, vapour is evolved having the smell of vinegar.

PLUMBI CARBONAS. *Carbonate of Lead.*

Syn. Pure White Lead.

A white substance, in powder or pulverulent masses, insoluble in water, but soluble with effervescence in dilute nitric acid. Potassa, added to the solution, produces a white precipitate, which is wholly dissolved by an excess of the alkali. Heat renders it yellow, and, with the aid of charcoal, reduces it to the metallic state.

PLUMBI NITRAS. *Nitrate of Lead.*

In white, nearly opaque, octahedral crystals, permanent in the air, and of a sweet, astringent taste. It is soluble in seven and a half parts of cold water, and in alcohol. Its solution is precipitated black by hydrosulphate of ammonium, white by ferrocyanide of potassium, and yellow by iodide of potassium. When triturated with sulphuric acid, it forms a mixture, which colours morphia red, and, on being heated, evolves nitrous fumes.

PLUMBI OXIDUM. *Oxide of Lead.*

Syn. Litharge.

In small, yellowish or orange-coloured scales, insoluble in water, but almost wholly soluble with slight effervescence in dilute nitric acid. The solution is affected by potassa, like that of carbonate of lead in the same acid. Heated with charcoal it is reduced to the metallic state.

PODOPHYLLUM. *May-apple.* Podophyllaceæ

The rhizome of Podophyllum peltatum.

POTASSII BICHROMAS. *Bichromate of Potassium.*

In orange-red, anhydrous, tabular crystals, soluble in ten parts of cold, and in much less of boiling water, forming a solution having an acid reaction. Exposed to a red heat it evolves oxygen; neutral chromate of potassium and sesquioxide of chromium being left. When the residue is acted on by water, the sesquioxide remains undissolved.

POTASSII BITARTRAS. *Bitartrate of Potassium.*

Syn. Cream of Tartar.

Bitartrate of Potassium is dissolved sparingly by water, but freely by a hot solution of potassa, which deposits it again upon the addition of an acid. Whatever remains undissolved by the alkaline solution is impurity. The precipitate produced with its aqueous solution by chloride of barium is soluble in nitric acid. It reddens litmus, and by a red heat is converted into carbonate of potassium.

POTASSII CARBONAS IMPURA. *Impure Carbonate of Potassium.*

The impure carbonate of potassium, known in commerce by the name of *pearlash.*

The soluble matter, contained in one hundred grains of this salt, neutralizes not less than fifty-eight grains of officinal sulphuric acid.

POTASSII CHLORAS. *Chlorate of Potassium.*

In colourless, tabular crystals, which have a pearly lustre, and are wholly soluble in distilled water. The solution yields no precipitate with nitrate of silver. When strongly heated the salt first melts, and afterwards gives off abundance of pure oxygen; the evolution of which having ceased, the residue is chloride of potassium. When a little sulphuric acid is dropped on the crystals, they become first yellow and then red.

POTASSII FERROCYANIDUM. *Ferrocyanide of Potassium.*

In crystals of a lemon-yellow colour, wholly soluble in water. The solution yields with most of the salts of sesquioxide of iron a deep-blue precipitate, and with the salts of copper a brown one. Exposed to a gentle heat, it becomes white, and loses twelve and a half per cent. of water.

POTASSII HYPOPHOSPHIS. *Hypophosphite of Potassium.*

In white, opaque, confused, crystalline masses, having a disagreeable, bitter taste. It is extremely deliquescent, very soluble in water and alcohol, and insoluble in ether. If heated in the air it burns with a yellow flame; heated to redness out of contact of

air, it evolves easily-inflammable phosphoretted hydrogen; when evaporated to dryness in contact with nitric acid, it detonates violently.

POTASSII NITRAS. *Nitrate of Potassium.*

In colourless, prismatic crystals, unalterable in the air, and wholly soluble in water. The solution yields no precipitate with chloride of barium or nitrate of silver. With bichloride of platinum it gives a yellow precipitate. By a strong heat the salt is first melted and then decomposed, oxygen escaping, and a salt remains which emits orange-coloured fumes on the addition of sulphuric acid. If one hundred grains of Nitrate of Potassium, previously dried, be mixed with sixty grains of officinal sulphuric acid, and the mixture be kept at a red heat until the salt ceases to lose weight, the residue will weigh eighty-six grains.

POTASSII PERMANGANAS. *Permanganate of Potassium.*

In needle-shaped crystals, of a deep-purple colour. It is soluble in sixteen parts of cold water, with the exception of a scanty, brown matter. A very dilute solution has a rose colour, free from green tinge, and is instantly decolorized by the officinal solution of arsenite of potassium, with the formation of a brown precipitate. Five grains dissolved in water, require for complete decoloration a solution of forty grains of crystallized sulphate of iron, acidulated with two fluidrachms of diluted sulphuric acid.

POTASSII SULPHAS. *Sulphate of Potassium.*

In hard, colourless crystals, unalterable in the air, sparingly soluble in cold water, and insoluble in alcohol. The solution is not precipitated by ammonia. With bichloride of platinum it yields a yellow precipitate, and with chloride of barium a white one, insoluble in nitric acid.

POTASSII SULPHIS. *Sulphite of Potassium.*

In white, opaque fragments or powder, very soluble in water. It has a saline and sulphurous taste. Sulphuric acid added to

its solution gives rise to the odour of burning sulphur, without impairing the transparency of the liquid. With bichloride of platinum it yields a yellow precipitate.

PRUNUM. *Prune.*

The fruit of Prunus domestica.

PRUNUS VIRGINIANA. *Wild Cherry.*

The bark of Cerasus serotina (*De Candolle*).

QUASSIA. *Quassia.*

The wood of Simaruba excelsa (*De Candolle*).

QUERCUS ALBA. *White Oak.*

The inner bark of Quercus alba.

QUERCUS TINCTORIA. *Black Oak.*

The inner bark of Quercus tinctoria.

RESINA. *Resin.*

The residue, after the distillation of the volatile oil, from the turpentine of Pinus palustris, and of other species of Pinus.

RHEUM. *Rhubarb.*

The root of Rheum palmatum, and of other species of Rheum, from China, Chinese Tartary, and Thibet.

ROSA CENTIFOLIA. *Pale Rose.*

The petals of Rosa centifolia.

ROSA GALLICA. *Red Rose.*

The petals of Rosa Gallica.

ROSMARINUS. *Rosemary.*

The leaves of Rosmarinus officinalis.

RUBUS. *Blackberry.*

The bark of the root of Rubus Canadensis, and of Rubus villosus.

RUTA. *Rue.*

The leaves of Ruta graveolens.

SABADILLA. *Cevadilla.*

The seed of Veratrum Sabadilla (*Retzius*).

SABINA. *Savine.*

The tops of Juniperus Sabina.

SACCHARUM. *Sugar.*

The sugar of Saccharum officinarum, refined.

SACCHARUM LACTIS. *Sugar of Milk.*

A crystalline substance obtained from whey.

In hard, white masses, having a sweet taste, and the specific gravity 1.5. It is gritty between the teeth, and dissolves slowly in six parts of cold or in three of boiling water, without forming a syrup. It is insoluble in ether, and but slightly soluble in alcohol.

SAGO. *Sago.*

The prepared fecula of the pith of Sagus Rumphii, and of other species of Sagus.

SALVIA. *Sage.*

The leaves of Salvia officinalis.

SAMBUCUS. *Elder.*

The flowers of Sambucus Canadensis.

SANGUINARIA. *Bloodroot.*

The rhizome of Sanguinaria Canadensis.

SANTALUM. *Red Saunders.*

The wood of Pterocarpus santalinus.

SANTONICA. *Santonica.*

Syn. Levant Wormseed.

The unexpanded flowers of Artemisia Cina (Willkomm, *Botanische Zeitung*, 1872, No. 9).

SAPO. *Soap.*

Soap made with soda and olive oil.

SARSAPARILLA. *Sarsaparilla.*

The root of Smilax officinalis (*Humboldt and Bonpland*), and of other species of Smilax.

SASSAFRAS. *Sassafras.*

The bark of the root of Sassafras officinale (Nees, *Laurin.*).

SASSAFRAS MEDULLA. *Sassafras Pith.*

The pith of the stems of Sassafras officinale (Nees, *Laurin.*).

SCAMMONIUM. *Scammony.*

A resinous exudation from the root of Convolvulus Scammonia.

Scammony does not effervesce on the addition of dilute muriatic acid, and the decoction, when cold, does not assume a blue colour on the addition of tincture of iodine. Ether dissolves at least seventy-five per cent. of it; and, when the ether has been evaporated, the residue, dissolved in a hot solution of caustic potassa, is not precipitated by dilute sulphuric acid.

SCILLA. *Squill.*

The bulb of Scilla maritima.

SCOPARIUS. *Broom.*

The tops of Sarothamnus Scoparius (*Wimmer*).

SENEGA. *Seneka.*

The root of Polygala Senega.

SENNA. *Senna.*

The leaflets of Cassia acutifolia (*Delile*), of Cassia obovata (*De Candolle*), and of Cassia elongata (Lemaire, *Journ. de Pharm.*, vii. 345).

SERPENTARIA. *Serpentaria.*

Syn. Virginia Snakeroot.

The root of Aristolochia Serpentaria, of Aristolochia reticulata, and of other species of Aristolochia.

SEVUM. *Suet.*

The prepared suet of Ovis Aries.

SINAPIS ALBA. *White Mustard.*

The seed of Sinapis alba.

SINAPIS NIGRA. *Black Mustard.*

The seed of Sinapis nigra.

SODII ACETAS. *Acetate of Sodium.*

In white or colourless crystals, which effloresce in dry air, and are wholly soluble in water. The solution yields no precipitate with carbonate of sodium, bichloride of platinum, or chloride of barium, and, if dilute, is not precipitated by nitrate of silver. The salt is decomposed by sulphuric acid, with the production of an acetous odour.

SODII BICARBONAS VENALIS. *Commercial Bicarbonate of Sodium.*

A white, opaque powder, containing variable amounts of soda not fully saturated with carbonic acid. It is wholly soluble in

water, is decomposed with effervescence by dilute acids, and gives a yellow colour to the flame of alcohol. When dissolved in successive portions of water, the first portions of the solution produce with solution of corrosive sublimate a reddish-brown precipitate, the latter portions have no effect.

SODII BORAS. *Borate of Sodium.*

Syn. Borax.

In colourless crystals, which slightly effloresce in dry air, and are wholly soluble in water. The solution has an alkaline reaction. Sulphuric acid, added to the saturated solution, causes a precipitate in crystalline scales, which impart a green colour to the flame of alcohol.

SODII CARBONAS. *Carbonate of Sodium.*

In colourless crystals, which rapidly effloresce on exposure to the air, and fall into a white powder. It is very soluble in water, and insoluble in alcohol. The solution has an alkaline reaction, and is decomposed with effervescence by acids. The precipitate produced with its solution by chloride of barium is wholly soluble in nitric acid.

SODII CHLORIDUM. *Chloride of Sodium.*

Syn. Common Salt.

A white salt, permanent in the air, and almost equally soluble in cold and boiling water. The solution yields no precipitate with carbonate of sodium, chloride of barium, or ferrocyanide of potassium.

SODII HYPOPHOSPHIS. *Hypophosphite of Sodium.*

A white salt crystallizing in tables which have a pearly lustre. It is very deliquescent, very soluble in water and in absolute alcohol, and insoluble in ether. It evolves, at a red heat, spontaneously inflammable phosphoretted hydrogen.

SODII HYPOSULPHIS. *Hyposulphite of Sodium.*

In large, colourless, transparent crystals, having a bitter,

slightly alkaline, and sulphurous taste. It is soluble in one and a half parts of water at 60°, and insoluble in alcohol. Its solution dissolves chloride and oxide of silver, and discharges the colour of solution of iodide of starch, and of the solution of iodine. Sulphuric acid added to its solution, gives rise to the odour of burning sulphur, and causes a white precipitate of sulphur.

SODII NITRAS. *Nitrate of Sodium.* $NaNO_3$.

In colourless, rhombohedral crystals, slightly deliquescent, and wholly soluble in water. The solution yields no precipitate with chloride of barium, nitrate of silver, or bichloride of platinum. Heated in a test-tube with sulphuric acid and copper wire, it gives off red vapours. If one hundred grains of it be heated with seventy-three grains of officinal sulphuric acid, and the mixture be kept at a red heat until the salt ceases to lose weight, the residue will weigh eighty-three and a half grains.

SODII SULPHAS. *Sulphate of Sodium.* $2NaHSO_4$

In colourless crystals, which rapidly effloresce on exposure to the air, and ultimately fall into a white powder. It is wholly dissolved by water. The solution does not alter the colour of litmus or turmeric. With chloride of barium it yields a white precipitate insoluble in nitric acid. A dilute solution affords little or no precipitate with nitrate of silver. One hundred grains of the crystals lose fifty-five and a half grains by exposure to a strong heat.

SODII SULPHIS. *Sulphite of Sodium.* $2Na_2SO_3$.

In white, efflorescent, prismatic crystals, soluble in four parts of cold, and in less than one part of boiling water. It has a sulphurous taste, and a feeble alkaline reaction. Sulphuric acid, added to its solution, gives rise to the odour of burning sulphur, without impairing the transparency of the liquid. The salt must be kept in well-stopped bottles.

SPIGELIA. *Spigelia.*

Syn. Pinkroot.

The root of Spigelia Marilandica.

SPIRITUS FRUMENTI. *Whisky.*

Spirit obtained from fermented grain by distillation, and containing from forty-eight to fifty-six per cent. by volume of absolute alcohol.

Whisky, for medicinal use, should be free from disagreeable odour, and not less than two years old.

SPIRITUS MYRCIÆ. *Spirit of Myrcia.*

Syn. Bay-rum.

The spirit obtained by distilling rum with the leaves of Myrcia acris (*Schwartz*).

SPIRITUS VINI GALLICI. *Brandy.*

The spirit obtained from fermented grapes by distillation, and containing from forty-eight to fifty-six per cent. by volume of absolute alcohol.

Brandy, for medicinal use, should be free from disagreeable odour, and not less than four years old.

STATICE. *Marsh Rosemary.*

The root of Statice Limonium, variety Caroliniana

STILLINGIA. *Stillingia.*

The root of Stillingia sylvatica.

STRAMONII FOLIA. *Stramonium Leaves.*

Stramonii Folium, *Pharm.*, 1860.

The leaves of Datura Stramonium.

STRAMONII SEMEN. *Stramonium Seed.*

The seed of Datura Stramonium.

STYRAX. *Storax.*

A balsam prepared from the bark of Liquidambar orientale (*Lamarck*).

SULPHUR LOTUM. *Washed Sulphur.*

Sublimed Sulphur, thoroughly washed with water.

Washed Sulphur is wholly volatilized by heat, and, when moistened with water, does not change the colour of litmus.

SULPHUR SUBLIMATUM. *Sublimed Sulphur.*

Sublimed Sulphur is wholly volatilized by heat.

SYRUPUS FUSCUS. *Molasses.*

The impure, dark-coloured syrup, obtained in making sugar from Saccharum officinarum.

TABACUM. *Tobacco.*

The commercial dried leaves of Nicotiana Tabacum.

TAMARINDUS. *Tamarind.*

The preserved fruit of Tamarindus Indica.

TAPIOCA. *Tapioca.*

The fecula of the root of Janipha Manihot (*Bot. Mag.*, 3071).

TARAXACUM. *Dandelion*

The root, gathered in the autumn, of Taraxacum Dens-leonis (*De Candolle*).

TEREBINTHINA. *Turpentine.*

The concrete oleoresin obtained from Pinus palustris, and from other species of Pinus.

TEREBINTHINA CANADENSIS. *Canada Turpentine.*

Syn. Balsam of Fir.

The liquid oleoresin obtained from Abies balsamea (Lindley, *Flor. Med.*).

TESTA. *Oyster-shell.*

The shell of Ostrea edulis.

TRAGACANTHA. *Tragacanth.*

The gummy exudation from Astragalus verus (*Olivier*), and from other species of Astragalus.

ULMUS. *Slippery-elm Bark.*

Ulmus Fulva, *Pharm.*, 1860.

The inner bark of Ulmus fulva (*Michaux*).

UVA PASSA. *Raisins.*

The dried fruit of Vitis vinifera.

UVA URSI. *Uva Ursi.*

The leaves of Arctostaphylos Uva Ursi (Sprengel, *Syst.*, ii. 287).

VALERIANA. *Valerian.*

The root of Valeriana officinalis.

VANILLA. *Vanilla.*

The prepared, unripe fruit of Vanilla aromatica.

VERATRUM ALBUM. *White Hellebore.*

The rhizome of Veratrum album.

VERATRUM VIRIDE. *American Hellebore.*

The rhizome of Veratrum viride.

VINUM PORTENSE. *Port Wine.*

VINUM XERICUM. *Sherry Wine.*

ZINCI OXIDUM VENALE. *Commercial Oxide of Zinc.*

A snow-white powder, insoluble in water, but soluble in dilute sulphuric and muriatic acids without effervescence. The solutions, when neutral, yield white precipitates with ferrocyanide of potassium and with hydrosulphate of ammonium.

ZINCI SULPHAS. *Sulphate of Zinc.*

In colourless crystals, which effloresce on exposure to the air. It is soluble in water, and the solution affords white precipitates with ammonia, chloride of barium, ferrocyanide of potassium, and hydrosulphate of ammonium. The precipitate, thrown down by ammonia, is wholly soluble in an excess of the alkali.

ZINCI VALERIANAS. *Valerianate of Zinc.*

A white, anhydrous salt, in the form of pearly scales, having a faint odour of valerianic acid, and a metallic, styptic taste. It dissolves in one hundred and sixty parts of water, and in sixty of alcohol of the specific gravity 0.833. The solutions have an acid reaction, and become turbid when heated, and clear again on cooling. When the salt is distilled with sulphuric acid, the distillate, added to a concentrated solution of acetate of copper, does not disturb its transparency.

ZINCUM. *Zinc.*

A bluish-white metal, having the specific gravity 6.8. It is almost entirely dissolved by dilute sulphuric acid, forming a colourless solution, which yields white precipitates with ferrocyanide of potassium and hydrosulphate of ammonium. Ammonia throws down from this solution a white precipitate, which is wholly dissolved when the alkali is added in excess.

ZINGIBER. *Ginger.*

The rhizome of Zingiber officinale (Roscoe, *Trans. Linn. Soc.*).

SECONDARY LIST.

ACHILLEA. *Yarrow.*

The leaves and flowering tops of Achillea millefolium

APOCYNUM ANDROSÆMIFOLIUM. *Dogs-bane.*

The root of Apocynum androsæmifolium.

APOCYNUM CANNABINUM. *Indian Hemp.*

The root of Apocynum cannabinum.

ARALIA NUDICAULIS. *False Sarsaparilla.*

The root of Aralia nudicaulis.

ARALIA SPINOSA. *Aralia.*

The bark of Aralia spinosa.

ASARUM. *Wild Ginger.*

Syn. Canada Snake-root.

The root of Asarum Canadense.

ASCLEPIAS INCARNATA. *Flesh-coloured Asclepias.*

The root of Asclepias incarnata.

ASCLEPIAS SYRIACA. *Common Silk-weed.*

The root of Asclepias Syriaca (Linn.), Asclepias cornuti (Decaisne *in Prodrom., D. C.*).

ASCLEPIAS TUBEROSA. *Butterfly-weed.*

Asclepias, *Pharm.*, 1860.

The root of Asclepias tuberosa.

AZEDARACH. *Azedarach.*

The bark of the root of Melia Azedarach.

BERBERIS. *Barberry.*

The bark of the root of Berberis vulgaris.

BRAYERA. *Koosso.*

The flowers and unripe fruit of Brayera anthelmintica

CALAMUS. *Calamus.*

The rhizome of Acorus Calamus.

CAROTA. *Carrot Seed.*

The fruit of Daucus Carota.

CARTHAMUS. *Safflower.*

The florets of Carthamus tinctorius.

CASTANEA. *Chestnut.*

The leaves of Castanea vesca.

CORNUS CIRCINATA. *Round-leaved Dogwood.*

The bark of Cornus circinata.

CORNUS SERICEA. *Swamp Dogwood.*

The bark of Cornus sericea.

COTULA. *May-weed.*

The herb of Anthemis Cotula, Maruta Cotula (*De Candolle*).

CURCUMA. *Turmeric.*

The rhizome of Curcuma longa.

CYDONIUM. *Quince Seed.*

The seed of Cydonia vulgaris (Persoon, *Enchr*, ii. 40).

CYPRIPEDIUM. *Cypripedium.*

The root of Cypripedium pubescens, and of Cypripedium parviflorum.

DELPHINIUM. *Larkspur.*

The seed of Delphinium Consolida.

DIOSPYROS. *Persimmon.*

The unripe fruit of Diospyros Virginiana.

DRACONTIUM. *Dracontium.*

The root of Dracontium fœtidum, Ictodes fœtidus (*Bigelow*), Symplocarpus fœtidus (*Salisbury*).

EUONYMUS. *Wahoo.*

The bark of Euonymus atropurpureus.

EUPHORBIA COROLLATA. *Large-flowering Spurge.*

The root of Euphorbia corollata.

EUPHORBIA IPECACUANHA. *Ipecacuanha Spurge.*

The root of Euphorbia Ipecacuanha

FRASERA. *American Columbo.*

The root of Frasera Walteri (*Michaux*).

GENTIANA CATESBÆI. *Blue Gentian.*

The root of Gentiana Catesbæi (*Elliot*).

GEUM. *Water Avens.*

The rhizome of Geum rivale.

GILLENIA. *Gillenia.*

The root of Gillenia trifoliata, and of Gillenia stipulacea.

HELIANTHEMUM. *Frostwort.*

The herb of Helianthemum Canadense (*Michaux*).

HEPATICA. *Liverwort.*

The leaves of Hepatica Americana (*De Candolle*)

HEUCHERA. *Alum-root.*

The rhizome of Heuchera Americana.

INULA. *Elecampane.*

The root of Inula Helenium.

IRIS FLORENTINA. *Florentine Orris.*

The rhizome of Iris Florentina.

IRIS VERSICOLOR. *Blue Flag.*

The rhizome of Iris versicolor.

JUNIPERUS VIRGINIANA. *Red Cedar.*

The tops of Juniperus Virginiana.

LAPPA. *Burdock.*

The root of Lappa minor (*De Candolle*).

LIRIODENDRON. *Tulip-tree Bark.*

The bark of Liriodendron tulipifera.

LYCOPUS. *Bugle-weed.*

The herb of Lycopus Virginicus (*Michaux*).

MAGNOLIA. *Magnolia.*

The bark of Magnolia glauca, Magnolia acuminata, and Magnolia tripetala.

MELISSA. *Balm.*

The leaves and tops of Melissa officinalis.

MUCUNA. *Cowhage.*

The hairs of the pods of Mucuna pruriens (*De Candolle*).

OLEUM SESAMI. *Benne Oil.*

The fixed oil of the seed of Sesamum Indicum, and of Sesamum orientale.

PANAX. *Ginseng.*

The root of Panax quinquefolium.

PETROSELINUM. *Parsley.*

The root of Petroselinum sativum (Lindley, *Flor. Med.*).

PHYTOLACCÆ BACCA. *Poke Berry.*

The fruit of Phytolacca decandra.

PHYTOLACCÆ RADIX. *Poke Root.*

The root of Phytolacca decandra.

POLYGALA RUBELLA. *Bitter Polygala.*

The root and herb of Polygala rubella.

PRINOS. *Black Alder.*

The bark of Prinos verticillatus.

PYRETHRUM. *Pellitory.*

The root of Anacyclus Pyrethrum (*De Candolle*).

RANUNCULUS. *Crowfoot.*

The corm and herb of Ranunculus bulbosus.

RHUS GLABRUM. *Sumach.*

The fruit of Rhus glabrum.

ROTTLERA. *Kameela.*

The glandular powder and hairs obtained from the capsules of Rottlera tinctoria (*Roxburgh*).

RUBIA. *Madder.*

The root of Rubia tinctorum.

RUMEX. *Yellow Dock.*

The root of Rumex crispus.

SABBATIA. *Sabbatia.*

Syn. American Centaury.

The herb of Sabbatia angularis (Pursh, *Flor. Amer. Sept.*).

SALIX. *Willow.*

The bark of Salix alba.

SCUTELLARIA. *Scullcap.*

The herb of Scutellaria lateriflora.

SESAMUM. *Benne.*

Sesami Folium, *Pharm.*, 1860.

The leaves of Sesamum Indicum, and of Sesamum orientale.

SIMARUBA. *Simaruba.*

The bark of the root of Simaruba officinalis (*De Candolle*).

SOLIDAGO. *Golden-rod.*

The leaves and tops of Solidago odora.

SPIRÆA. *Hardhack.*

The root of Spiræa tomentosa.

TANACETUM. *Tansy.*

The leaves and tops of Tanacetum vulgare.

TORMENTILLA. *Tormentil.*

The rhizome of Potentilla Tormentilla (*De Candolle*).

TOXICODENDRON. *Poison-oak.*

The leaves of Rhus Toxicodendron.

TRIOSTEUM. *Fever-root.*

The root of Triosteum perfoliatum.

VIOLA. *Violet.*

The root of Viola pedata.

XANTHORRHIZA. *Yellow-root.*

The root of Xanthorrhiza apiifolia.

XANTHOXYLUM. *Prickly Ash.*

The bark of Xanthoxylum fraxineum, and of Xanthoxylum Carolinianum.

PREPARATIONS.

ACETA.

ACETUM DESTILLATUM.

DISTILLED VINEGAR.

Take of Vinegar eight pints.

Distil, by means of a sand-bath, from a glass retort into a glass receiver, seven pints.

Distilled Vinegar may be substituted for Diluted Acetic Acid in the preparation of the officinal vinegars.

Distilled Vinegar is wholly volatilized by heat, yields no precipitate with acetate of lead or nitrate of silver, and does not change colour upon the addition of hydrosulphuric acid or ammonia. If silver be digested in it, and muriatic acid afterwards added, no precipitate will be produced. One hundred grains saturate not less than seven and six-tenths grains of bicarbonate of potassium.

ACETUM LOBELIÆ.

VINEGAR OF LOBELIA.

Take of Lobelia, in moderately coarse powder, four troyounces;

Diluted Acetic Acid a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Acetic Acid, pack it firmly in a conical glass percolator,

and gradually pour upon it Diluted Acetic Acid until the filtered liquid measures two pints.

Vinegar of Lobelia may also be prepared by macerating the powder in two pints of Diluted Acetic Acid for seven days, expressing the liquid, and filtering through paper.

ACETUM OPII.

VINEGAR OF OPIUM.

BLACK DROP.

Take of Opium, dried, and in moderately coarse powder, five troyounces;
Nutmeg, in moderately coarse powder, a troyounce;
Sugar eight troyounces;
Diluted Acetic Acid a sufficient quantity.

Macerate the Opium and Nutmeg in a pint of Diluted Acetic Acid for twenty-four hours. Put the mixture into a conical glass percolator, and return the liquid which first passes until the filtrate becomes clear. Then gradually pour on Diluted Acetic Acid until the filtered liquid measures twenty-six fluidounces. In this dissolve the Sugar, and, having strained the solution, add sufficient Diluted Acetic Acid to make the whole measure two pints.

ACETUM SANGUINARIÆ.

VINEGAR OF BLOODROOT.

Take of Bloodroot, in moderately coarse powder, four troyounces;
Diluted Acetic Acid a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Acetic Acid, pack it firmly in a conical glass percolator, and gradually pour upon it Diluted Acetic Acid until the filtered liquid measures two pints.

Vinegar of Bloodroot may also be prepared by macerating the powder in two pints of Diluted Acetic Acid for seven days, expressing the liquid, and filtering through paper.

ACETUM SCILLÆ.

VINEGAR OF SQUILL.

Take of Squill, in moderately coarse powder, four troy-ounces;

Diluted Acetic Acid a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Acetic Acid, and, after the mixture has ceased to swell, transfer it to a conical glass percolator, pack it carefully, and gradually pour upon it Diluted Acetic Acid until the filtered liquid measures two pints.

Vinegar of Squill may also be prepared by macerating the Squill in two pints of Diluted Acetic Acid for seven days, expressing the liquid, and filtering through paper

ACIDA.

ACIDUM ACETICUM DILUTUM.

DILUTED ACETIC ACID.

Take of Acetic Acid a pint;
Distilled Water seven pints.

Mix them.

Diluted Acetic Acid has the specific gravity 1.006; and one hundred grains of it neutralize seven and six-tenths grains of bicarbonate of potassium. It is affected by reagents in the same manner as Acetic Acid. (See *Acidum Aceticum.*)

ACIDUM BENZOICUM.

BENZOIC ACID.

Take of Benzoin, in coarse powder, twelve troyounces.

Spread the Benzoin evenly over the bottom of an iron dish eight inches in diameter and two inches deep, cover the dish with a piece of filtering paper, and, by means of paste, attach it closely to the rim. Then, having prepared a conical receiver or cap of thick, well-sized paper, of rather larger diameter than the dish, invert it over the latter, so as to fit closely around the rim. Next apply heat by means of a sand-bath, or of the iron plate of a stove, until, without much empyreuma, vapours of Benzoic Acid cease to rise. Lastly, separate the receiver from time to time, and remove the Benzoic Acid from it and the paper diaphragm, as long as the Acid continues to be deposited. By

renewing the paper diaphragm, after it has become so obstructed as to prevent the passage of vapour, an additional quantity of Benzoic Acid may be obtained.

Benzoic Acid, thus obtained, is in white feathery crystals, of a peculiar, agreeable odour, and warm, acidulous taste. It is fusible, wholly volatilizable if cautiously heated, sparingly soluble in cold water, more soluble in boiling water, which deposits it in part on cooling, and very soluble in alcohol. It is dissolved by solutions of potassa, soda, ammonia, and lime, forming combinations from which it is precipitated by muriatic acid.

ACIDUM GALLICUM.

GALLIC ACID.

Take of Nutgall, in fine powder, thirty-six troyounces;
Purified Animal Charcoal,
Distilled Water, each, a sufficient quantity.

Mix the Nutgall with sufficient Distilled Water to form a thin paste, and expose the mixture to the air, in a shallow glass or porcelain vessel, in a warm place, for a month, occasionally stirring it with a glass rod, and adding from time to time sufficient Distilled Water to preserve the semi-fluid consistence. Then submit the paste to expression, and, rejecting the expressed liquid, boil the residue in eight pints of Distilled Water for a few minutes, and filter while hot through Purified Animal Charcoal. Set the liquid aside that crystals may form, and dry them on bibulous paper. If the crystals be not sufficiently free from colour, they may be purified by dissolving them in boiling Distilled Water, filtering through a fresh portion of Purified Animal Charcoal, and again crystallizing.

Gallic Acid is in small, silky, nearly colourless crystals, having a slightly acid and astringent taste. It is soluble in one hundred parts of cold, and in three of boiling water. The solution reddens litmus, and does not produce a precipitate with a solution of gelatin, or of sulphate of protoxide of iron. With solutions of the salts of sesquioxide of iron, it produces a bluish-black precipitate, the colour of which disappears when the liquid is heated. It is decomposed by a strong heat, and entirely dissipated when thrown on red-hot iron.

ACIDUM HYDROCYANICUM DILUTUM.

DILUTED HYDROCYANIC ACID.

Take of Ferrocyanide of Potassium two troyounces;
Sulphuric Acid a troyounce and a half;
Distilled Water a sufficient quantity.

Mix the Acid with four fluidounces of Distilled Water, and pour the mixture, when cool, into a glass retort. To this add the Ferrocyanide of Potassium, dissolved in ten fluidounces of Distilled Water. Pour eight fluidounces of Distilled Water into a cooled receiver, and, having attached this to the retort, distil, by means of a sand-bath, with a moderate heat, six fluidounces. Lastly, add to the product five fluidounces of Distilled Water, or as much as may be sufficient to render the Diluted Hydrocyanic Acid of such a strength, that twelve and seven-tenths grains of nitrate of silver, dissolved in distilled water, may be exactly neutralized by one hundred grains of the Acid.

Diluted Hydrocyanic Acid, when wanted for immediate use, may be prepared in the following manner:

Take of Cyanide of Silver fifty grains and a half;
Muriatic Acid forty-one grains;
Distilled Water a fluidounce.

Mix the Muriatic Acid with the Distilled Water, add the Cyanide of Silver, and shake the whole together in a well-stopped vial. When the precipitate formed has subsided, pour off the clear liquid, and keep it for use.

Diluted Hydrocyanic Acid must be kept in well-stopped bottles, protected from the light.

A colourless liquid, having a peculiar odour, and wholly volatilized by heat. It imparts a faint, evanescent red colour to litmus, and is not discoloured by hydrosulphuric acid. With solution of nitrate of silver, added in slight excess, one hundred grains of it produce a white precipitate, which, when washed with water until the washings are tasteless, and dried at a temperature not exceeding 212°, weighs ten grains, and is wholly soluble in boiling nitric acid.

The Diluted Acid, prepared according to the above processes, contains two per cent. of anhydrous acid.

ACIDUM MURIATICUM DILUTUM.

DILUTED MURIATIC ACID.

Take of Muriatic Acid four troyounces;
Distilled Water a sufficient quantity.

Mix the Acid, in a glass vessel, with sufficient Distilled Water to make the Diluted Acid measure a pint.

The specific gravity of Diluted Muriatic Acid is 1.038.

ACIDUM NITRICUM DILUTUM.

DILUTED NITRIC ACID.

Take of Nitric Acid three troyounces;
Distilled Water a sufficient quantity.

Mix the Acid, in a glass vessel, with sufficient Distilled Water to make the Diluted Acid measure a pint.

The specific gravity of Diluted Nitric Acid is 1.068.

ACIDUM NITROMURIATICUM.

NITROMURIATIC ACID.

Take of Nitric Acid three troyounces;
Muriatic Acid five troyounces.

Mix the Acids in a glass vessel, and, when effervescence has ceased, keep the product in a well-stopped bottle, in a cool place, protected from the light.

A liquid, having a deep golden-yellow colour, and the odour of chlorine. It readily dissolves gold-leaf, and is wholly volatilized by heat.

ACIDUM NITROMURIATICUM DILUTUM.

DILUTED NITROMURIATIC ACID.

Take of Nitric Acid a troyounce and a half;
Muriatic Acid two troyounces and a half;
Distilled Water a sufficient quantity.

Mix the Acids in a well-stopped bottle, having the capacity of a pint. Shake them together occasionally during twenty-four hours, and then add sufficient Distilled Water to make the Diluted Acid measure a pint. Lastly, keep it in a cool place, protected from the light.

ACIDUM PHOSPHORICUM DILUTUM.

DILUTED PHOSPHORIC ACID.

Take of Phosphorus three hundred and sixty grains;
Nitric Acid five troyounces, or a sufficient quantity;
Distilled Water a sufficient quantity.

Mix five troyounces of Nitric Acid with half a pint of Distilled Water, in a porcelain capsule, of the capacity of

two pints. Add the Phosphorus, and invert over it a glass funnel of such dimensions that its rim may rest on the inside of the capsule, near the surface of the liquid. Place the capsule on a sand-bath, and apply a moderate heat until the Phosphorus is dissolved, and red vapours cease to rise. If the reaction becomes too violent, add a little Distilled Water; and, if the red vapours cease to be evolved before the Phosphorus is all dissolved, gradually add Nitric Acid, diluted to the same extent as before with Distilled Water, until the solution is effected. Then, removing the funnel, continue the heat until the excess of Nitric Acid is driven off, and a syrupy liquid, free from odour and weighing two ounces, remains. Lastly, mix this, when cold, with sufficient Distilled Water to make it measure twenty fluidounces, and filter through paper.

Diluted Phosphoric Acid may also be prepared by dissolving a troyounce of Glacial Phosphoric Acid in three fluidounces of Distilled Water, adding to the solution forty grains of Nitric Acid, boiling it until reduced to a syrupy consistence, and free from the odour of nitric acid, and then adding sufficient Distilled Water to make the Diluted Acid measure twelve fluidounces and a half.

A colourless, inodorous liquid, of the specific gravity 1.056. It is not precipitated by chloride of barium or nitrate of silver, when either is added in small proportion. It has no action on pure silver or copper, and is not discoloured by hydrosulphuric acid, added before or after contact with either of these metals. One hundred grains of it are saturated by twenty-three and four-tenths grains of bicarbonate of potassium, and no precipitate is produced.

ACIDUM SULPHURICUM AROMATICUM.

AROMATIC SULPHURIC ACID.

ELIXIR OF VITRIOL.

Take of Sulphuric Acid six troyounces;
Ginger, in moderately fine powder, a troyounce;
Cinnamon, in moderately fine powder, a troyounce and a half;
Alcohol a sufficient quantity.

Add the Acid gradually to a pint of Alcohol, and allow the liquid to cool. Mix the Ginger and Cinnamon, and, having packed them firmly in a percolator, pour Alcohol gradually upon them until a pint of tincture is obtained. Lastly, mix the diluted acid and the tincture.

ACIDUM SULPHURICUM DILUTUM.

DILUTED SULPHURIC ACID.

Take of Sulphuric Acid two troyounces;
Distilled Water a sufficient quantity.

Add the Acid gradually to fourteen fluidounces of Distilled Water, and mix them. After twenty-four hours, filter through paper, and pass sufficient Distilled Water through the filter to make the Diluted Acid measure a pint.

The specific gravity of this acid is 1.082.

ACIDUM SULPHUROSUM.

SULPHUROUS ACID.

Take of Sulphuric Acid eight troyounces;
Charcoal, in coarse powder, a troyounce;
Distilled Water thirty-six fluidounces.

Pour the Acid upon the Charcoal, previously introduced into a matrass, and shake them together. Connect the matrass with a washing bottle, and this, by means of a bent glass tube reaching nearly to the bottom of it, with a two-necked bottle containing the Distilled Water. To the other neck of this bottle attach another bent tube, and let it dip slightly into a solution of carbonate of soda. All the joints having been properly luted, apply heat to the matrass until gas ceases to be evolved, preventing the temperature of the Distilled Water from rising, by means of cold water applied to the bottle containing it. Lastly, pour the Sulphurous Acid into half-pint dark-coloured bottles, which must be well stopped, and kept in a cool place.

A colourless liquid, having the odour of burning sulphur, and a sulphurous, sour, and somewhat astringent taste. Its specific gravity is about 1.035. When saturated with ammonia, and then treated with an excess of chloride of barium, it should afford a clear or nearly clear solution on the addition of muriatic acid in excess.

ACIDUM TANNICUM.

TANNIC ACID.

Take of Nutgall, in fine powder,

Ether, each, a sufficient quantity.

Expose the Nutgall to a damp atmosphere for twenty-four hours, and then mix it with sufficient Ether, previously washed with water, to form a soft paste. Set this aside, covered closely, for six hours; then, having quickly enveloped it in a close canvas cloth, express it powerfully between tinned plates, so as to obtain the liquid portion. Reduce the resulting cake to powder, and mix it with sufficient

Ether, shaken with one-sixteenth of its bulk of water, to form again a soft paste, and express as before. Mix the liquids, and allow the mixture to evaporate spontaneously until it assumes a syrupy consistence; then spread it on glass or tinned plates, and dry it quickly in a drying closet. Lastly, remove the residue from the plates with a spatula, and keep it in a well-stopped bottle.

Tannic Acid has a yellowish-white colour, and strongly astringent taste. It is decomposed and entirely dissipated when thrown on red-hot iron. It is very soluble in water, and less so in alcohol and ether. Its solution reddens litmus, and produces with solution of gelatin a white, flocculent precipitate; with the salts of sesquioxide of iron a bluish-black precipitate; and with solutions of the alkaloids white precipitates, very soluble in acetic acid.

ACONITIA.

ACONITIA.

ACONITIA.

Take of Aconite Root, in moderately fine powder, forty-eight troyounces;
Diluted Sulphuric Acid a fluidounce and a half;
Alcohol,
Stronger Water of Ammonia,
Stronger Ether,
Distilled Water, each, a sufficient quantity.

Digest the powder in eight pints of Alcohol, in a close vessel, at the temperature of 120°, for twenty-four hours. Introduce the mixture into a cylindrical percolator, and

gradually pour Alcohol upon it until twenty-four pints of liquid have slowly passed. Distil off the alcohol from the filtered liquid until this is reduced to the measure of a pint. Then add to the concentrated liquid a pint of Distilled Water, to which has been added the Diluted Sulphuric Acid, and mix thoroughly. Remove from the liquid the fixed oil and resin which separate on standing, and evaporate it to four fluidounces. When the liquid has cooled, pour it into a glass-stoppered pint bottle, and wash it, by agitation and decantation, with six fluidounces of Stronger Ether, to remove the remainder of the fixed oil and resin. Now add Stronger Water of Ammonia until, after agitation, it remains in slight excess. Next, treat the resulting mixture with six fluidounces of Stronger Ether, and, having closed the bottle, agitate briskly for a few minutes. Allow the liquid to stand until it separates into two layers, the lighter being an ethereal solution of Aconitia. Decant this carefully, and treat what remains, twice successively, with the same quantity of Stronger Ether, decanting each time as before. Mix the several ethereal solutions in a porcelain capsule, and allow the mixture to evaporate spontaneously to dryness. Lastly, reduce the dry residue to powder, and keep it in a well-stopped bottle.

Aconitia, thus obtained, is a yellowish-white powder, without smell, and having a bitter, acrid taste, which is accompanied with a sense of numbness. It melts at a moderate heat, and, at a high temperature, is decomposed and entirely dissipated, yielding the smell of ammonia. It requires one hundred and fifty parts of cold, or fifty of boiling water for solution, and is readily dissolved by alcohol, ether, and chloroform. It dissolves in nitric acid, forming a colourless solution, and produces, with sulphuric acid, an opaque, brown liquid. Its solution in water or

alcohol restores the blue color to reddened litmus. It neutralizes acids, forming with them uncrystallizable salts, which are not precipitated by a solution of bichloride of platinum.

ÆTHEREA.

ÆTHER.

ETHER.

Take of Stronger Alcohol six pints;
Sulphuric Acid thirty-six troyounces;
Potassa three hundred and sixty grains;
Distilled Water three fluidounces.

To two pints of the Alcohol, contained in a six-pint tubulated retort, gradually add the Acid, stirring constantly during the addition. By means of a cork fitted to the tubulure, adapt a long funnel-shaped tube, with the lower end drawn out so as to form a narrow orifice, and reaching nearly to the bottom of the retort, and also a thermometer tube, graduated from 260° to 300°, with its bulb reaching to the middle of the liquid. Having placed the retort on a sand-bath, connect it with a Liebig's condenser, and this with a well-cooled receiver. Then raise the heat quickly until the liquid boils, and attains a temperature between 266° and 280°. By means of a flexible tube, connected with the stop-cock of an elevated vessel containing the remainder of the Alcohol, introduce that liquid into the retort, through the funnel-shaped tube, in a continuous stream; the quantity supplied being so regulated, that the temperature of the boiling liquid shall con-

tinue between the degrees mentioned. After all the Alcohol has been added, proceed with the distillation until the temperature rises to 286°, when the process should be discontinued. To the distilled liquid add the Potassa, previously dissolved in the Distilled Water, and shake them occasionally together. At the end of twenty-four hours, pour off the supernatant liquid, introduce it into a retort, and, with a gentle heat, distil into a well-cooled receiver three pints, or until the liquid attains the specific gravity 0.750. Lastly, keep the Ether in a well-stopped bottle.

Ether is a very inflammable liquid, having the specific gravity 0.750. It wholly evaporates in the air, and does not redden litmus. When shaken with an equal bulk of water, it loses from one-fifth to one-fourth of its volume.

ÆTHER FORTIOR.

STRONGER ETHER.

Take of Ether,

Water, each, three pints,

Chloride of Calcium, in fine powder,

Lime, in fine powder, each, a troyounce.

Shake the Ether and the Water thoroughly together, and, when the Water has subsided, separate the supernatant ether. Agitate this well with the Chloride of Calcium and the Lime in a well-stopped bottle, and allow the mixture to stand for twenty-four hours. Then decant the ether into a retort, and, having adapted thereto a Liebig's condenser, distil a pint and a half of Stronger Ether into a receiver refrigerated with ice-cold water. Lastly, keep the liquid in a well-stopped bottle.

By continuing the distillation, a portion of weaker ether may be obtained.

Stronger Ether has a specific gravity not exceeding 0.728. It is extremely inflammable, and does not redden litmus. Shaken with an equal bulk of water, it loses from one-tenth to one-eighth of its volume. It boils actively in a test-tube, half filled with it and enclosed in the hand, on the addition of small pieces of glass. Half a fluidounce of the liquid, evaporated from a porcelain plate by causing it to flow to and fro over the surface, yields a faintly aromatic odour as the last portions pass off, and leaves the surface without taste or smell, but covered with a deposit of moisture.

CHLOROFORMUM PURIFICATUM.

PURIFIED CHLOROFORM.

Take of Commercial Chloroform one hundred troyounces;
Sulphuric Acid twenty troyounces;
Stronger Alcohol twelve fluidrachms;
Carbonate of Sodium five troyounces;
Lime, in coarse powder, half a troyounce;
Water ten fluidounces.

Add the Acid to the Chloroform, and shake them together occasionally during twenty-four hours. Separate the lighter liquid, and add to it the Carbonate of Sodium previously dissolved in the Water; agitate the mixture thoroughly for half an hour, and set it aside; then separate the Chloroform from the supernatant layer, and mix it with the Alcohol. When the mixture has separated into two transparent layers, transfer the Chloroform into a dry retort, add the lime, and distil, by means of a water-bath,

into a well-cooled receiver, taking care that the temperature in the retort does not rise above 153°, until one troyounce of residue is left. Keep the distilled liquid in well-stopped bottles.

Purified Chloroform is a colourless, volatile liquid, not inflammable, of a bland ethereal odour, and hot, aromatic, saccharine taste. Its specific gravity is 1.480. It boils at 142°. It is slightly soluble in water, and freely so in alcohol and in ether. When shaken with an equal volume of sulphuric acid, in a bottle closed by a glass stopper, and allowed to remain in contact for twenty-four hours, no colour is imparted to either. When one fluidrachm is evaporated spontaneously with one drop of a neutral, aqueous solution of litmus, the colour of the latter is not reddened. The result of the test is the same, if the chloroform, contained in a white glass bottle, has been previously exposed to direct sunlight for ten hours.

OLEUM ÆTHEREUM.

ETHEREAL OIL.

Take of Stronger Alcohol two pints;
Sulphuric Acid fifty-five troyounces;
Distilled Water a fluidounce;
Stronger Ether a sufficient quantity.

Add the Acid slowly to the Alcohol, mix them thoroughly, and allow the mixture to stand for twelve hours. Decant the clear liquid from the sediment, into a tubulated retort of such capacity, that the mixture shall nearly fill it. Adapt a thermometer tube to the tubulure by means of a cork, so that the bulb shall be deeply immersed in the liquid, and, having attached a Liebig's condenser, distil, by means of a sand-bath, at a temperature between 302° and 315°, until the liquid ceases to come over, or until a

black froth begins to arise in the retort. Separate the yellow ethereal liquid from the distillate, and expose it for twenty-four hours, in a shallow capsule, to evaporate spontaneously. Then transfer the remaining liquid to a wet filter; and, when the watery portion has drained off, wash the oil which is left, while on the filter, with the Distilled Water. When this also has drained off, transfer the oil to a graduated measure, by perforating the point of the filter, and add to it an equal volume of Stronger Ether.

The Ethereal Oil, obtained by this formula, measures about six fluidrachms.

Ethereal Oil, thus prepared, is a transparent, nearly colourless, volatile liquid, of a peculiar, aromatic, ethereal odour, and sharp, bitter taste. It is neutral to litmus paper not previously moistened, and has the specific gravity 0.91.

ALOE.

ALOE PURIFICATA.

PURIFIED ALOES.

Take of Socotrine Aloes twenty-four troyounces;
Stronger Alcohol four fluidounces.

Heat the Aloes, by means of a water-bath, until it is completely melted. Then add the Alcohol, and, having stirred the mixture thoroughly, strain it through a fine sieve, which has just been dipped into boiling water. Evaporate the strained mixture by means of a water-bath, constantly stirring, until a thread of the liquid becomes brittle on cooling. Lastly, break the product when cold

into pieces of a convenient size, and keep it in a well-stopped bottle.

Purified Aloes is in brittle pieces, of a dull brown or reddish-brown colour, and having the peculiar aromatic odour of Socotrine Aloes. It is almost entirely soluble in alcohol.

ALUMINIUM.

ALUMEN EXSICCATUM.

DRIED ALUM.

Take of Alum, in coarse powder, four troyounces.

Place it in a suitable vessel, and subject it to a temperature not exceeding 400°, until the residue weighs two troyounces and one hundred and twenty grains; then, when cold, reduce it to fine powder.

ALUMINII SULPHAS.

SULPHATE OF ALUMINIUM.

Take of Alum,

Carbonate of Sodium, each, four troyounces;

Sulphuric Acid a troyounce and one hundred and fifty grains;

Water a sufficient quantity.

Dissolve the salts separately, each in six fluidounces of boiling Water; pour the solution of the Alum gradually into that of the Carbonate of Sodium, and digest with a gentle heat until the evolution of carbonic acid ceases. Collect upon a filter the precipitate formed, and wash it with water until the washings are no longer affected by chloride of barium.

Next, with the aid of heat, dissolve the precipitate in the Sulphuric Acid, previously diluted with half a pint of Water, and, having filtered the solution, evaporate it until a pellicle begins to form. Then remove it to a water-bath, and continue the evaporation, with constant stirring, until a dry salt remains. Lastly, preserve this in a well-stopped bottle.

AMMONIUM.

AMMONII BENZOAS.

BENZOATE OF AMMONIUM.

Take of Benzoic Acid two troyounces;
Water of Ammonia three fluidounces and a half,
or a sufficient quantity;
Distilled Water four fluidounces.

Dissolve the Acid in three fluidounces and a half of the Water of Ammonia, previously mixed with the Distilled Water; evaporate with a gentle heat, occasionally adding Water of Ammonia, if necessary, to maintain a slight excess of the alkali; then set aside to crystallize, and dry the crystals without heat.

Benzoate of Ammonium is in minute, white, shining, thin, four-sided laminar crystals, with a slight odour of officinal benzoic acid, and a bitterish, saline, somewhat balsamic taste, and slightly acrid but persistent after-taste. It is soluble in water and alcohol, and, when heated, sublimes without residue. Its aqueous solution, heated with potassa, evolves ammonia, and, if not too dilute, deposits benzoic acid when acidulated with muriatic acid. It gives a copious yellow precipitate with the salts of sesquioxide of iron.

AMMONII BROMIDUM.

BROMIDE OF AMMONIUM.

Take of Bromine two troyounces;

Iron, in the form of wire and cut in pieces, a troyounce;

Water of Ammonia four fluidounces and a half;

Distilled Water a sufficient quantity.

Add the Iron and then the Bromine to half a pint of Distilled Water, contained in a glass flask having the capacity of two pints; loosely cork the flask, and agitate the mixture until the odour of Bromine can no longer be perceived, and the liquid assumes a greenish colour. Mix the Water of Ammonia with half a pint of Distilled Water, and add it to the mixture in the flask; agitate the mixture, and heat it by means of a water-bath for half an hour; then filter, and, when the liquid ceases to pass, wash the precipitate on the filter with boiling distilled water. Evaporate the solution, in a porcelain capsule, until a pellicle begins to form, then stir it constantly with a glass rod, at a moderate heat, until it granulates.

A white, granular salt, becoming yellow on exposure, readily soluble in water, and sparingly so in alcohol. When mixed with mucilage of starch, if chlorine water be added, it will become yellowish-brown, and should exhibit no tint of blue. If a solution containing ten grains of the salt be mixed with a solution of seventeen grains of nitrate of silver, and the mixture be shaken until the yellow precipitate which forms shall separate in flocculi from the clear liquid, the further addition of nitrate of silver will cause a cloud in the liquid.

AMMONII CHLORIDUM PURIFICATUM.

PURIFIED CHLORIDE OF AMMONIUM.

Take of Chloride of Ammonium, in small pieces, twenty troyounces;
Water of Ammonia five fluidrachms;
Water two pints.

Dissolve the Chloride of Ammonium in the Water, in a porcelain dish, with the aid of heat; add the Water of Ammonia, and continue the heat for a short time; filter the solution while hot, and evaporate to dryness, with constant stirring, at a moderate heat, until it granulates.

Purified Chloride of Ammonium is a snow-white, crystalline powder, soluble in two and a half parts of cold, and in its own weight of boiling water; it is soluble in alcohol, has a faint acid reaction, and is not discoloured by Tannic Acid.

AMMONII IODIDUM.

IODIDE OF AMMONIUM.

Take of Iodide of Potassium, in coarse powder, four troyounces;
Sulphate of Ammonium, in coarse powder, a troyounce;
Boiling Distilled Water two fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix the salts, add them to the Boiling Water, stir well, and allow the mixture to cool; then add a fluidounce of Alcohol, mix well, and reduce the temperature, by a bath of iced water, to about 40°; throw the mixture into a cooled glass funnel, stopped with moistened cotton, and, when the

clear solution has passed, pour upon the salt a fluidounce of a mixture containing two parts of water and one part of Alcohol. Lastly, evaporate the solution rapidly to dryness, stirring constantly; and preserve the residue in a well-stopped bottle.

A white, granular, very deliquescent salt, becoming yellowish-brown by exposure, very soluble in water and in alcohol. Nitric acid liberates iodine, and solution of potassa liberates ammonia. When the salt is dissolved in starch-water, if chlorine water be added, a blue colour will be produced. As made by this process, Iodide of Ammonium contains a minute proportion of sulphate of potassium.

AMMONII VALERIANAS.

VALERIANATE OF AMMONIUM.

Take of Valerianic Acid four fluidounces;
Chloride of Ammonium,
Lime, each, a sufficient quantity.

From a mixture, of Chloride of Ammonium, in coarse powder, and an equal weight of Lime, previously slaked and in powder, contained in a suitable vessel, obtain gaseous ammonia, and cause it to pass, first through a bottle filled with pieces of Lime, and afterwards into the Valerianic Acid, in a tall, narrow, glass vessel, until the Acid is neutralized. Then discontinue the process, and set the vessel aside that the Valerianate of Ammonium may crystallize. Lastly, break the salt into pieces, drain it, if necessary, in a glass funnel, dry it on bibulous paper, and keep it in a well-stopped bottle.

Valerianate of Ammonium is a white salt, in the form of quadrangular plates, having the disagreeable odour of valerianic acid, and a sharp,

sweetish taste. It deliquesces in a moist air, but effloresces in a dry one, and is very soluble in water and in alcohol. It is decomposed by potassa with evolution of ammonia, and by the mineral acids with separation of the valerianic acid, which rises to the surface in the form of an oil.

ANTIMONIUM.

ANTIMONII ET POTASSII TARTRAS.

TARTRATE OF ANTIMONY AND POTASSIUM.

TARTAR EMETIC.

Take of Oxide of Antimony, in very fine powder, two troyounces;

Bitartrate of Potassium, in very fine powder, two troyounces and a half;

Distilled Water eighteen fluidounces.

To the Water, heated to the boiling point in a glass vessel, add the powders, previously mixed, and boil for an hour; then filter the liquid while hot, and set it aside that crystals may form. Lastly, dry the crystals, and keep them in a well-stopped bottle.

By further evaporation the mother-water may be made to yield more crystals, which should be purified by a second crystallization.

This salt is in transparent crystals, which become white and opaque on exposure to the air. It is wholly soluble in twenty parts of water. The solution yields no precipitate with chloride of barium, or, if very dilute, with nitrate of silver. Hydrosulphuric acid causes an orange-red precipitate. A solution containing one part in forty of water, is not disturbed by an equal volume of a solution of eight parts of acetate of lead in thirty-two of water and fifteen of acetic acid.

ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

Take of Sulphuret of Antimony, in very fine powder, four troyounces;
Muriatic Acid eighteen troyounces;
Nitric Acid a troyounce and one hundred and twenty grains;
Water of Ammonia a fluidounce and a half;
Water,
Distilled Water, each, a sufficient quantity.

Introduce the Sulphuret into a flask, of the capacity of two pints, and, having added the Muriatic Acid, digest, by means of a sand-bath, until effervescence ceases. Then, having removed the flask from the sand-bath, add the Nitric Acid gradually; and, when nitrous acid vapours cease to be given off, and the liquid is cold, add to it half a pint of Water, and filter. Pour the filtered liquid gradually into twelve pints of Water, constantly stirring, and allow the precipitate to subside. Decant the supernatant liquid, and wash the precipitate twice by decantation, using, each time, eight pints of Water. Then transfer it to a muslin filter to drain, and, after the draining is completed, wash it with Water until the washings cease to have an acid reaction. Next introduce it into a suitable vessel, and subject it to the action of the Water of Ammonia for two hours; then transfer it to a moistened muslin filter, and wash it with Distilled Water as long as the washings produce a precipitate with nitrate of silver.

Lastly, dry the precipitate upon bibulous paper with the aid of a gentle heat.

Oxide of Antimony is a grayish-white powder, insoluble in water, but readily and wholly soluble in muriatic or tartaric acid. It fuses at a dull-red heat, forming a yellowish liquid, which concretes, on cooling, into a crystalline mass of a pearl colour. Its solution in tartaric acid in excess gives no precipitate with nitrate of silver, or with ferrocyanide of potassium.

ANTIMONII OXYSULPHURETUM.

OXYSULPHURET OF ANTIMONY.

KERMES MINERAL.

Take of Sulphuret of Antimony, in very fine powder, a troyounce;

Carbonate of Sodium twenty-three troyounces;

Water sixteen pints.

Dissolve the Carbonate of Sodium in the Water previously heated to the boiling point, and, having added the Sulphuret of Antimony, boil for an hour. Then filter rapidly into a warm earthen vessel, cover this closely, and allow the liquid to cool slowly. At the end of twenty-four hours, decant the supernatant liquid, drain the precipitate on a filter, wash it with cold water that has been previously boiled, and dry it without heat. Lastly, preserve the powder in a well-stopped bottle, protected from the light.

Oxysulphuret of Antimony is a purplish-brown, tasteless powder, soft and velvety to the touch, wholly and readily soluble in muriatic acid with evolution of hydrosulphuric acid gas, and partly soluble in a hot solution of potassa, leaving a residue soluble in tartaric acid.

ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

Take of Sulphuret of Antimony, in very fine powder, six troyounces;
Solution of Potassa four pints;
Distilled Water,
Diluted Sulphuric Acid, each, a sufficient quantity.

Mix the Sulphuret of Antimony with the Solution of Potassa and twelve pints of Distilled Water, and boil the mixture over a gentle fire for two hours, constantly stirring, and occasionally adding Distilled Water so as to preserve the same measure. Strain the liquid immediately through a double muslin strainer, and drop into it, while yet hot, Diluted Sulphuric Acid so long as it produces a precipitate. Then wash the precipitate with hot water to remove the sulphate of potassium, dry it, and rub it into a fine powder.

Sulphurated Antimony is a reddish-brown powder, insoluble in water. When treated with twelve times its weight of officinal muriatic acid, with the aid of heat, it is nearly all dissolved, with effervescence of hydrosulphuric acid. The residue, after having been washed and dried, burns with the characters of sulphur, and leaves a scanty ash. The solution in muriatic acid, when added to water, deposits a white powder. The liquid filtered from this powder yields an orange-red precipitate with hydrosulphate of ammonium. Water in which the preparation has been boiled should not yield a white precipitate with chloride of barium, or with oxalate of ammonium.

AQUÆ.

AQUA ACIDI CARBOLICI.

CARBOLIC ACID WATER.

Take of Glycerite of Carbolic Acid ten fluidrachms;
Distilled Water a sufficient quantity.

Mix the Glycerite of Carbolic Acid with a sufficient quantity of Distilled Water to make the mixture measure a pint.

AQUA ACIDI CARBONICI.

CARBONIC ACID WATER.

By means of a proper apparatus, impregnate Water, contained in a suitable receiver, with a quantity of carbonic acid, equal to five times the bulk of the Water.

Carbonic Acid Water should not be allowed to be in contact with copper or lead, either in the apparatus in which it is produced, the tubes by which it is transferred, or the vessels containing it.

Carbonic acid may be obtained from Bicarbonate of Sodium or from Marble by means of dilute sulphuric acid.

Carbonic Acid Water is not discoloured by hydrosulphuric acid or solution of ammonia, and yields no precipitate with sulphate of sodium, or with ferrocyanide of potassium.

AQUA AMMONIÆ.

WATER OF AMMONIA.

SOLUTION OF AMMONIA.

Take of Chloride of Ammonium, in small pieces,
Lime, each, twelve troyounces;
Water six pints;
Distilled Water a sufficient quantity.

Pour a pint of the Water upon the Lime, in a convenient vessel; and, after it has slaked, stir the mixture so as to bring it to the consistence of a smooth paste. Then add the remainder of the Water, and mix the whole thoroughly together. Decant the milky liquid from the gritty sediment into a glass retort, of the capacity of sixteen pints, and add the Chloride of Ammonium. Place the retort on a sand-bath, and adapt to it a washing-bottle, previously connected with a two-pint bottle, by means of a glass tube, reaching nearly to the bottom of the bottle, and containing a pint of Distilled Water. Surround the bottle with ice-cold water, and apply heat, gradually increased, until ammonia ceases to come over. Remove the liquid from the bottle, and add to it sufficient Distilled Water to raise its specific gravity to 0.960. Lastly, keep the liquid in small bottles, well stopped.

Water of Ammonia is a transparent, colourless liquid, having a very pungent odour, quite free from empyreuma. Its specific gravity is 0.960, and one hundred grains of it neutralize thirty grains of officinal sulphuric acid. With a slight excess of nitric acid it remains transparent and colourless; and with nitrate of silver or chloride of barium it affords no precipitate.

AQUA AMYGDALÆ AMARÆ.

BITTER ALMOND WATER.

Take of Oil of Bitter Almond sixteen minims;
Carbonate of Magnesium sixty grains;
Distilled Water two pints.

Rub the Oil, first with the Carbonate of Magnesium, and then with the Water, gradually added, and filter through paper.

AQUA ANISI.

ANISE WATER.

Take of Oil of Anise half a fluidrachm;
Carbonate of Magnesium sixty grains;
Distilled Water two pints.

Rub the Oil, first with the Carbonate of Magnesium, and then with the Water, gradually added, and filter through paper.

Anise Water may also be prepared by mixing ten troyounces of Anise, in coarse powder, with sixteen pints of Water, and distilling eight pints.

AQUA AURANTII FLORUM.

ORANGE FLOWER WATER.

Take of recent Orange Flowers forty-eight troyounces;
Water sixteen pints.

Mix them, and, by means of steam, distil eight pints.

AQUA CAMPHORÆ.

CAMPHOR WATER.

Take of Camphor one hundred and twenty grains;
Alcohol forty minims;
Carbonate of Magnesium half a troyounce;
Distilled Water two pints.

Rub the Camphor, first with the Alcohol, then with the Carbonate of Magnesium, and lastly with the Water, gradually added; then filter through paper.

AQUA CHLORINII.

CHLORINE WATER.

Take of Black Oxide of Manganese, in fine powder, half a troyounce;
Muriatic Acid three troyounces;
Water four fluidounces;
Distilled Water twenty fluidounces.

Introduce the Oxide into a flask, add the Acid previously diluted with two fluidounces of the Water, and apply a gentle heat. Conduct the generated chlorine, by suitable tubes, through the remainder of the Water, contained in a small intermediate vessel, to the bottom of a four-pint bottle containing the Distilled Water, and loosely stopped with cotton. When the air has been entirely displaced by the gas, disconnect the bottle from the apparatus, and, having inserted the stopper, agitate the contents, loosening the stopper from time to time, until the gas ceases to be absorbed. Lastly, pour the Chlorine Water

into a bottle, of just sufficient capacity to hold it, stop it securely, and keep it in a cool place, protected from the light.

Chlorine Water is a greenish-yellow liquid, possessing the suffocating odour of chlorine. When a fluidounce of it is mixed with a solution of ten grains of pure sulphate of iron in two fluidrachms of water, the mixture does not produce a blue precipitate with ferrid cyanide of potassium.

AQUA CINNAMOMI.

CINNAMON WATER.

Take of Oil of Cinnamon half a fluidrachm;
Carbonate of Magnesium sixty grains;
Distilled Water two pints.

Rub the Oil, first with the Carbonate of Magnesium, and then with the Water, gradually added, and filter through paper.

Cinnamon Water may also be prepared by mixing eighteen troyounces of Cinnamon, in coarse powder, with sixteen pints of Water, and distilling eight pints.

AQUA CREASOTI.

CREASOTE WATER.

Take of Creasote a fluidrachm;
Distilled Water a pint.

Mix them, and agitate the mixture until the Creasote is dissolved; then filter through paper.

AQUA DESTILLATA.

DISTILLED WATER.

Take of Water eighty pints.

Distil two pints, using a tin or glass condenser, and throw them away; then distil sixty-four pints, and keep them in well-stopped glass bottles.

Distilled Water is insipid, colourless, and inodorous, and when evaporated leaves no residue. Its transparency or colour is not affected by lime-water, hydrosulphuric acid, chloride of barium, nitrate of silver, or oxalate of ammonium.

AQUA FŒNICULI.

FENNEL WATER.

Take of Oil of Fennel half a fluidrachm;
Carbonate of Magnesium sixty grains;
Distilled Water two pints.

Rub the Oil, first with the Carbonate of Magnesium, and then with the Water, gradually added, and filter through paper.

Fennel Water may also be prepared by mixing eighteen troyounces of Fennel, in coarse powder, with sixteen pints of Water, and distilling eight pints.

AQUA MENTHÆ PIPERITÆ.

PEPPERMINT WATER.

Take of Oil of Peppermint half a fluidrachm;
Carbonate of Magnesium sixty grains;
Distilled Water two pints.

Rub the Oil, first with the Carbonate of Magnesium, and

then with the Water, gradually added, and filter through paper.

Peppermint Water may also be prepared by mixing eighteen troyounces of Peppermint with sixteen pints of Water, and distilling eight pints.

AQUA MENTHÆ VIRIDIS.

SPEARMINT WATER.

Take of Oil of Spearmint half a fluidrachm;
Carbonate of Magnesium sixty grains;
Distilled Water two pints.

Rub the Oil, first with the Carbonate of Magnesium, and then with the Water, gradually added, and filter through paper.

Spearmint Water may also be prepared by mixing eighteen troyounces of Spearmint with sixteen pints of Water, and distilling eight pints.

AQUA ROSÆ.

ROSE WATER.

Take of recent Pale Rose forty-eight troyounces;
Water sixteen pints.

Mix them, and distil eight pints.

When it is desirable to keep the Rose for some time before distilling, it may be preserved by being well mixed with half its weight of chloride of sodium.

ARGENTUM.

ARGENTI CYANIDUM.

CYANIDE OF SILVER.

Take of Nitrate of Silver,

Ferrocyanide of Potassium, each, two troyounces;

Sulphuric Acid a troyounce and a half;

Distilled Water a sufficient quantity.

Dissolve the Nitrate of Silver in a pint of Distilled Water, and pour the solution into a tubulated glass receiver. Dissolve the Ferrocyanide of Potassium in ten fluidounces of Distilled Water, and pour the solution into a tubulated retort, previously adapted to the receiver. Having mixed the Sulphuric Acid with four fluidounces of Distilled Water, add the mixture to the solution in the retort, and distil, by means of a sand-bath, with a moderate heat, until six fluidounces have passed over, or until the distillate no longer produces a precipitate in the receiver. Lastly, wash the precipitate with Distilled Water, and dry it.

Cyanide of Silver is a white powder, insoluble in water and in cold nitric acid, but soluble in that acid at the boiling temperature. When it is exposed to heat, cyanogen is given off, and metallic silver left.

ARGENTI NITRAS.

NITRATE OF SILVER.

Take of Silver, in small pieces, two troyounces;
Nitric Acid two troyounces and a half;
Distilled Water a sufficient quantity.

Mix the Acid with a fluidounce of Distilled Water in a porcelain capsule, add the Silver to the mixture, cover it with an inverted glass funnel resting within the edge of the capsule, and apply a gentle heat until the metal is dissolved, and red vapours cease to be produced; then remove the funnel, and, increasing the heat, evaporate the solution to dryness. Melt the dry mass, and continue the heat, stirring constantly with a glass rod, until free nitric acid is entirely dissipated. Dissolve the salt, when cold, in six fluidounces of Distilled Water, allow the insoluble matter to subside, and decant the clear solution. Mix the residue with a fluidounce of Distilled Water, filter through paper, and, having added the filtrate to the decanted solution, evaporate the liquid until a pellicle begins to form, and set it aside in a warm place to crystallize. Lastly, drain the crystals in a glass funnel until dry, and preserve them in a well-stopped bottle.

By evaporating the mother-water, more crystals may be obtained.

Nitrate of Silver is a heavy, colourless, anhydrous salt, wholly soluble in distilled water, and crystallizing in shining, rhombic plates. Its solution, treated with muriatic acid in excess, yields a white precipitate, wholly soluble in ammonia; and the liquid, filtered from the precipitate, is not coloured by hydrosulphuric acid, and, when evaporated, leaves no residue.

ARGENTI NITRAS FUSA.

FUSED NITRATE OF SILVER.

Take of Nitrate of Silver a convenient quantity.

Melt it in a porcelain capsule, and continue the heat cautiously until frothing ceases; then pour the melted salt into suitable silver moulds.

A small portion of Fused Nitrate of Silver, rubbed into fine powder with twice its weight of sugar, forms a mixture, which, when burned upon a surface of glass or porcelain, leaves a tasteless residue. When treated with muriatic acid, as directed in the note to Nitrate of Silver, the liquid, filtered from the precipitate, is totally evaporated by heat.

ARGENTI OXIDUM. Ag_2O

OXIDE OF SILVER.

Take of Nitrate of Silver four troyounces;
Distilled Water half a pint;
Solution of Potassa a pint and a half, or a sufficient quantity.

Dissolve the Nitrate of Silver in the Water, and to the solution add Solution of Potassa so long as it produces a precipitate. Wash this repeatedly with water until the washings are nearly tasteless. Lastly, dry the precipitate, and keep it in a well-stopped bottle, protected from the light.

Oxide of Silver is an olive-brown powder, very slightly soluble in water. Exposed to heat it gives out oxygen, and metallic silver is left. When it is dissolved in nitric acid, and the solution is precipitated by chloride of sodium in excess, the liquid filtered from the precipitate is not coloured by hydrosulphate of ammonium.

ARSENICUM.

ARSENICI IODIDUM.

IODIDE OF ARSENIC.

Take of Arsenic sixty grains;

Iodine three hundred grains.

Rub the Arsenic in a mortar until reduced to a fine powder; then add the Iodine, and rub them together until they are thoroughly mixed. Put the mixture into a small flask or a test-tube, loosely stopped, and heat it very gently until liquefaction occurs. Then incline the vessel in different directions, in order that any portion of the Iodine, which may have condensed on its surface, may be returned into the melted mass. Lastly, pour the melted Iodide on a porcelain slab, and, when it is cold, break it into pieces, and keep it in a well-stopped bottle.

Iodide of Arsenic is an orange-red, crystalline solid, entirely soluble in water, and wholly volatilized by heat.

ATROPIA.

ATROPIA.

ATROPIA.

Take of Belladonna Root, in fine powder, forty-eight troyounces;

Purified Chloroform four troyounces and a half;

Diluted Sulphuric Acid,

Solution of Potassa,

Alcohol,

Water, each, a sufficient quantity.

Mix the powder with a pint of Alcohol, and, having introduced the mixture into a cylindrical percolator, pour Alcohol gradually upon it until sixteen pints have passed. From the liquid, thus obtained, distil off twelve pints of alcohol. To the residue add sufficient Diluted Sulphuric Acid to give it an acid reaction, and, having evaporated the liquid to half a pint, add an equal bulk of Water, and filter through paper. To the filtered liquid add, first a troyounce and a half of the Chloroform, and then Solution of Potassa in slight excess, and shake the whole together, at intervals, for half an hour. When the heavier liquid has subsided, separate it, and, having added a troyounce and a half of the Chloroform to the lighter liquid, again shake them together, and separate the heavier from the lighter liquid as before. Add to this lighter liquid the remainder of the Chloroform, and, after agitation, separate the heavier liquid for the third time. Mix the heavier liquids in a capsule, and set the mixture aside until, by spontaneous evaporation, the Atropia is left dry.

Atropia, thus prepared, is in yellowish-white, silky, prismatic crystals, without smell, but having a bitter and acrid taste. When heated it melts, and afterwards, on increasing the heat, is partly volatilized unchanged. It is soluble in three hundred parts of water at 60°, in twenty-five parts of ether, and in much less alcohol. It has a strong alkaline reaction, and forms crystallizable salts with acids. Atropia and its salts are decomposed and rendered inert by prolonged contact with caustic potassa, and, if heated with that alkali, evolve ammonia. When applied to the eye, in weak solution, they powerfully dilate the pupil.

ATROPIÆ SULPHAS.

SULPHATE OF ATROPIA.

Take of Atropia sixty grains;
Stronger Ether four fluidounces and a half;
Sulphuric Acid six grains;
Stronger Alcohol a fluidrachm.

Dissolve the Atropia in the Ether; then mix the Acid and Alcohol, and add the mixture, drop by drop, to the ethereal solution until the Atropia is neutralized. Allow the liquid to stand until the precipitate formed is deposited. Then decant the ether, and allow the residue to evaporate spontaneously until the salt is left dry.

Sulphate of Atropia is a white, slightly crystalline powder, very soluble in water and in alcohol, insoluble in ether, and wholly dissipated by heat. It is neutral to litmus, and gives a white precipitate with solution of chloride of barium.

BARIUM.

BARII CHLORIDUM.

CHLORIDE OF BARIUM.

Take of Carbonate of Barium, in small pieces,
Muriatic Acid, each, four troyounces;
Water a pint.

Mix the Acid with the Water, and gradually add the Carbonate of Barium. Towards the close of the effervescence apply a gentle heat, and, when chemical action has ceased, filter the liquid, and evaporate so that crystals may form when it cools.

Chloride of Barium is wholly soluble in water. Its solution is not affected by ammonia or hydrosulphuric acid. When sulphuric acid is added in excess, no further precipitate is produced by the addition of carbonate of sodium.

BISMUTHUM.

BISMUTHI SUBCARBONAS.

SUBCARBONATE OF BISMUTH.

Take of Bismuth, in pieces, two troyounces;
Nitric Acid eight troyounces and a half;
Water of Ammonia five fluidounces;
Carbonate of Sodium ten troyounces;
Distilled Water a sufficient quantity.

Mix four troyounces and a half of the Nitric Acid with four fluidounces of Distilled Water, in a capacious glass vessel, and, having added the Bismuth, set the whole aside for twenty-four hours. Dilute the resulting solution with ten fluidounces of Distilled Water, stir it thoroughly, and, after twenty-four hours, filter through paper. To the filtered liquid, previously diluted with four pints of Distilled Water, slowly add the Water of Ammonia, diluted with an equal measure of Distilled Water, constantly stirring. Transfer the whole to a strainer, and, after the precipitate has been drained, wash it with two pints of Distilled Water, and drain it again. Then place the precipitate in a proper vessel, add the remainder of the Nitric Acid, and afterwards four fluidounces of Distilled Water, and set the solution aside. At the end of twenty-four hours, filter through paper.

Dissolve the Carbonate of Sodium in twelve fluidounces of Distilled Water, with the aid of heat, and filter the solution through paper. To this, when cold, slowly add the solution of nitrate of bismuth, with constant stirring. Transfer the whole to a strainer, and, after the precipitate has been drained, wash it with Distilled Water until the washings pass tasteless. Lastly, dry it on bibulous paper with a gentle heat, and rub it into powder.

Subcarbonate of Bismuth is a white or yellowish-white powder, without taste or smell, insoluble in water, but soluble, with effervescence, in dilute nitric acid. Upon being heated to redness, it loses nine and a half per cent. of its weight. When mixed with dilute sulphuric acid in excess, and subjected to Marsh's test, it yields no arsenic, or merely a trace.

BISMUTHI SUBNITRAS.

SUBNITRATE OF BISMUTH.

Take of Bismuth, in pieces, two troyounces;
Nitric Acid,
Carbonate of Sodium, each, ten troyounces;
Water of Ammonia six fluidounces;
Distilled Water a sufficient quantity.

Mix four troyounces and a half of the Nitric Acid with four fluidounces of Distilled Water, in a capacious glass vessel, and, having added the Bismuth, set the whole aside for twenty-four hours. Dilute the resulting solution with ten fluidounces of Distilled Water, stir it thoroughly, and, at the end of twenty-four hours, filter through paper.

Dissolve the Carbonate of Sodium in twelve fluidounces of Distilled Water with the aid of heat, and filter the solution through paper. To this, when cold, slowly add the

solution of Nitrate of Bismuth, with constant stirring. Transfer the whole to a strainer, and, after the precipitate has been drained, wash it with Distilled Water until the washings pass tasteless, and drain again as completely as possible. Then place the moist precipitate in a capacious vessel, gradually add the remainder of the Nitric Acid, and afterwards four fluidounces of Distilled Water, and set the solution aside. At the end of twenty-four hours, filter through paper, and to the filtered liquid, previously diluted with four pints of Distilled Water, slowly add the Water of Ammonia, with constant stirring. Transfer the whole to a strainer, and, after the precipitate has been drained, wash it with two pints of Distilled Water, and drain it again. Lastly, dry it upon bibulous paper with a gentle heat, and rub it into powder.

Subnitrate of Bismuth is a heavy, white powder, of a somewhat satiny appearance. It has a faintly acid odour and taste, and, when moistened on litmus paper, a decidedly acid reaction. It is entirely soluble, without effervescence, in nitric acid, and the solution yields no precipitate with dilute sulphuric acid. Upon being heated to redness it loses twenty per cent. of its weight. When mixed with dilute sulphuric acid in excess, and subjected to Marsh's test, it yields no arsenic, or merely a trace.

CADMIUM.

CADMII SULPHAS.

SULPHATE OF CADMIUM.

Take of Cadmium, in small pieces, a troyounce;

Nitric Acid two troyounces;

Carbonate of Sodium three troyounces;

Sulphuric Acid four hundred and twenty grains;
Distilled Water a sufficient quantity.

To the Cadmium and two fluidounces of Distilled Water, contained in a glass vessel, add by degrees the Nitric Acid, and, when the action slackens, apply a gentle heat until the metal is dissolved. Filter the solution, and, having dissolved the Carbonate of Sodium in six fluidounces of Distilled Water, mix the solutions thoroughly. Wash the precipitate obtained, until the water passes tasteless, and dissolve it in the Sulphuric Acid diluted with four fluidounces of Distilled Water. Then evaporate the solution to one-third, and set it aside to crystallize. Lastly, dry the crystals on bibulous paper.

Sulphate of Cadmium is in colourless, prismatic crystals, efflorescent in the air, and very soluble in water. Its solution, even when rendered decidedly acid, yields, on the addition of hydrosulphate of ammonium, a yellow precipitate, insoluble in an excess of the precipitant.

CALCIUM.

CALCII CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF CALCIUM.

Take of Solution of Chloride of Calcium five pints and a half;
Carbonate of Sodium seventy-two troyounces;
Distilled Water a sufficient quantity.

Dissolve the Carbonate of Sodium in six pints of Distilled Water. Heat this solution and the Solution of Chloride of Calcium, separately, to the boiling point, and mix them. After the precipitate has subsided, separate it

from the supernatant liquid by decantation, and wash it with boiling Distilled Water until the washings cease to be affected by a solution of nitrate of silver. Lastly, dry the precipitate on bibulous paper.

Precipitated Carbonate of Calcium is a very fine, white powder, free from grittiness, insoluble in water, but wholly soluble in dilute muriatic acid, with copious effervescence of carbonic acid gas.

CALCII PHOSPHAS PRÆCIPITATA.

PRECIPITATED PHOSPHATE OF CALCIUM.

Take of Bone, calcined to whiteness, and in fine powder, four troyounces;
Muriatic Acid eight troyounces;
Water of Ammonia twelve fluidounces, or a sufficient quantity;
Distilled Water a sufficient quantity.

Macerate the Bone in the Acid diluted with a pint of Distilled Water, until it is dissolved, and filter the solution Add another pint of Distilled Water, and then, gradually, Water of Ammonia until the liquid acquires an alkaline reaction. Mix the precipitate obtained, while yet in the state of magma, with twice its bulk of boiling Distilled Water, and pour the whole upon a strainer. Wash the precipitate with boiling Distilled Water until the washings cease to be affected by a solution of nitrate of silver, acidulated with nitric acid. Lastly, dry the precipitate with a gentle heat.

Precipitated Phosphate of Calcium is a white powder, inodorous and tasteless, fusible without decomposition by an intense heat, insoluble in water, but freely soluble in nitric, muriatic, and acetic acids

Its solution in dilute nitric acid yields a precipitate with oxalate of ammonium; and the same solution, neutralized as far as possible without causing precipitation, gives a lemon-yellow precipitate with solution of ammonio-nitrate of silver.

CRETA PRÆPARATA.

PREPARED CHALK.

Take of Chalk a convenient quantity.

Add a little water to the Chalk, and rub it into fine powder. Throw this into a large vessel nearly full of water, stir briskly, and, after a short interval, decant into another vessel the supernatant liquid, while yet turbid. Treat the coarser particles of Chalk, remaining in the first vessel, in a similar manner, and add the turbid liquid to that previously decanted. Lastly, let the powder subside, and, having poured off the water, dry it.

TESTA PRÆPARATA.

PREPARED OYSTER-SHELL.

Take of Oyster-shell a convenient quantity.

Free the Oyster-shell from extraneous matter, wash it with boiling water, and, having reduced it to a fine powder, treat this in the manner directed for Prepared Chalk.

CARBO.

CARBO ANIMALIS PURIFICATUS.

PURIFIED ANIMAL CHARCOAL.

Take of Animal Charcoal, in fine powder,
Muriatic Acid, each, twelve troyounces;
Water twelve fluidounces.

Pour the Muriatic Acid, previously mixed with the Water, gradually upon the Charcoal, and digest with a gentle heat for two days, occasionally stirring the mixture. Having allowed the undissolved portion to subside, pour off the supernatant liquid, wash the Charcoal frequently with water until the washings cease to afford a precipitate with nitrate of silver, and dry it. Then heat it to redness, and when cool, keep it in well-stopped bottles.

Purified Animal Charcoal does not effervesce on the addition of muriatic acid; nor does it impart to the acid anything capable of yielding a precipitate with ammonia or its carbonate.

CERATA.

CERATUM.

CERATE.

Ceratum Adipis, *Pharm.*, 1860.

Take of Lard eight troyounces;

White Wax four troyounces.

Melt them together, and stir the mixture constantly until cool.

CERATUM CANTHARIDIS.

CANTHARIDES CERATE.

BLISTERING CERATE.

Take of Cantharides, in very fine powder, twelve troyounces;

Yellow Wax,

Resin, each, seven troyounces,

Lard ten troyounces.

To the Wax, Resin, and Lard, previously melted together,

and strained through muslin, add the Cantharides, and, by means of a water-bath, keep the mixture in a liquid state for half an hour, stirring occasionally. Then remove it from the water-bath, and stir it constantly until cool.

CERATUM CETACEI.

SPERMACETI CERATE.

Take of Spermaceti a troyounce;
White Wax three troyounces;
Olive Oil five troyounces.

Melt together the Spermaceti and Wax; then add the Oil previously heated, and stir the mixture constantly until cool.

CERATUM EXTRACTI CANTHARIDIS.

CERATE OF EXTRACT OF CANTHARIDES.

Take of Cantharides, in fine powder, five troyounces;
Stronger Alcohol two pints and a half, or a sufficient quantity;
Resin three troyounces;
Yellow Wax six troyounces;
Lard seven troyounces.

Moisten the Cantharides with two fluidounces of Stronger Alcohol, pack it in a cylindrical percolator, and gradually pour on Stronger Alcohol, until the liquid passes nearly colourless. Evaporate the filtered liquid, by means of a water-bath, to the consistence of a soft extract. Mix this with the Resin, Wax, and Lard, previously melted together, and keep the whole at the temperature of 212° for fifteen

minutes. Lastly, strain the mixture through muslin, and stir it constantly until cool.

CERATUM PLUMBI SUBACETATIS.

CERATE OF SUBACETATE OF LEAD.

GOULARD'S CERATE.

Take of Solution of Subacetate of Lead two fluidounces and a half;
White Wax four troyounces;
Olive Oil eight troyounces;
Camphor thirty grains.

Mix the Wax, previously melted, with seven troyounces of the Oil. Then remove the mixture from the fire, and, when it begins to thicken, gradually pour in the Solution of Subacetate of Lead, stirring constantly with a wooden spatula until it becomes cool. Lastly, add the Camphor dissolved in the remainder of the Oil, and mix with the cerate.

Cerate of Subacetate of Lead may also be prepared by mixing intimately together,

Cerate three hundred and fifty grains;
Olive Oil fifty grains;
Solution of Subacetate of Lead a fluidrachm and a half;
Liniment of Camphor twelve grains.

CERATUM RESINÆ.

RESIN CERATE.

BASILICON OINTMENT.

Take of Resin ten troyounces;
Yellow Wax four troyounces;
Lard sixteen troyounces.

Melt them together, strain the mixture through muslin, and stir it constantly until cool.

CERATUM RESINÆ COMPOSITUM.

COMPOUND RESIN CERATE.

Take of Resin,
Suet,
Yellow Wax, each, twelve troyounces;
Turpentine six troyounces;
Flaxseed Oil seven troyounces.

Melt them together, strain the mixture through muslin, and stir it constantly until cool.

CERATUM SABINÆ.

SAVINE CERATE.

Take of Fluid Extract of Savine three fluidounces;
Resin Cerate twelve troyounces.

Melt the Resin Cerate, add the Fluid Extract of Savine, and, at a moderate heat, stir the mixture constantly until the alcohol has evaporated; then continue to stir until cool.

CERATUM SAPONIS.

SOAP CERATE.

Take of Soap Plaster two troyounces;
Yellow Wax two troyounces and a half;
Olive Oil four troyounces.

Melt together the Plaster and Wax, add the Oil, and, after continuing the heat a few minutes, stir the mixture until cool.

CERATUM ZINCI CARBONATIS.

CERATE OF CARBONATE OF ZINC.

Take of Precipitated Carbonate of Zinc two troyounces;
Ointment ten troyounces.

Mix them thoroughly.

CHARTÆ.

CHARTA CANTHARIDIS.

CANTHARIDES PAPER.

Take of White Wax four troyounces;
Spermaceti one troyounce and a half;
Olive Oil two troyounces;
Canada Turpentine,
Cantharides, in powder, each, half a troyounce;
Water five fluidounces.

Mix all the substances in a tinned vessel, and boil gently for two hours, constantly stirring. Filter through a woollen strainer without expressing, and keep the mixture in a

liquid state by means of a shallow water-bath with an extended surface. Coat strips of paper upon one side only, with the melted plaster, by passing them successively over the surface of the liquid; and cut the strips when dry into rectangular pieces.

CHARTA SINAPIS.

MUSTARD PAPER.

Take of Black Mustard, in powder, ninety grains;
Solution of Gutta-percha a sufficient quantity.

Mix the Mustard with as much of the Solution as may be necessary to give it a semi-liquid consistence; then apply the whole of the mixture, by means of a suitable brush, to a piece of rather stiff paper, four inches square, so as completely to cover one side of it; and allow the surface to dry.

Before being applied to the skin, let the mustard paper be dipped for about fifteen seconds in warm water.

CINCHONIA.

CINCHONIÆ SULPHAS.

SULPHATE OF CINCHONIA.

Take of the mother-water, remaining after the crystallization of Sulphate of Quinia, in the process for preparing that salt, a convenient quantity;
Solution of Soda,
Alcohol,
Diluted Sulphuric Acid,

Animal Charcoal, in fine powder, each, a sufficient quantity.

To the mother-water add gradually, with constant stirring, Solution of Soda, until the liquid becomes alkaline. Collect on a filter the precipitate formed, wash it with water, and dry it. Then wash it with successive small portions of Alcohol, to remove other alkaloids which may be present. Mix the residue with eight times its weight of water, and, having heated the mixture, add gradually Diluted Sulphuric Acid, until it is neutralized and becomes clear. Then boil the liquid with Animal Charcoal, filter it while hot, and set it aside to crystallize. Lastly, drain the crystals, and dry them on bibulous paper. By evaporating the mother-liquid, more crystals may be obtained.

Sulphate of Cinchonia is in white, shining crystals, having the form of short, oblique prisms, with dihedral summits. It melts at 212°, loses its water of crystallization at a somewhat higher temperature, and is dissipated at a red heat. It dissolves in fifty-four parts of cold water, in much less boiling water, in seven parts of alcohol, and very sparingly in ether. Its aqueous solution gives with terchloride of gold a yellow precipitate, and with chloride of calcium a white one. Ammonia, added to its solution in chlorine water, causes a white precipitate. If the salt be rubbed with water of ammonia, and then treated with ether, the cinchonia, separated by the former, will not be dissolved by the latter.

COLLODIUM.

COLLODIUM.

COLLODION.

Take of Pyroxylon two hundred grains;
Stronger Ether twelve fluidounces and a half;
Stronger Alcohol three fluidounces and a half.

Mix the Ether and Alcohol in a suitable bottle, and, having added the Pyroxylon to the mixture, agitate occasionally until it is dissolved.

Collodion is a slightly opalescent liquid, of a syrupy consistence. By long standing it deposits a layer of fibrous matter, and becomes more transparent. This layer should be reincorporated, by agitation, before the Collodion is used. When applied it should form a colourless, transparent, flexible, and strongly contractile film.

COLLODIUM CUM CANTHARIDE.

COLLODION WITH CANTHARIDES.

CANTHARIDAL COLLODION.

Take of Cantharides, in fine powder, eight troyounces;
Pyroxylon one hundred grains;
Canada Turpentine three hundred and twenty grains;
Castor Oil one hundred and sixty grains;
Stronger Ether a pint and a half;
Stronger Alcohol a sufficient quantity.

Introduce the Cantharides into a cylindrical percolator, and, having pressed it firmly, gradually pour on the

Ether. When fifteen fluidounces have passed, set aside the liquid in a close vessel, and continue the percolation with Stronger Alcohol until half a pint more of liquid is obtained. Set this in a warm place for spontaneous evaporation, and, when it is reduced to a fluidounce, mix it with the reserved liquid. Then add the Pyroxylon, the Canada Turpentine, and the Castor Oil to the mixture, and agitate occasionally until they are dissolved. Lastly, keep the solution in a well-stopped bottle.

COLLODIUM FLEXILE.

FLEXIBLE COLLODION.

Take of Collodion a pint;

Canada Turpentine three hundred and twenty grains;

Castor Oil one hundred and sixty grains.

Mix them, and keep the mixture in a well-stopped bottle.

CONFECTIONES.

CONFECTIO AROMATICA.

AROMATIC CONFECTION.

Take of Aromatic Powder four troyounces;

Clarified Honey four troyounces, or a sufficient quantity.

Rub the Aromatic Powder with Clarified Honey until a uniform mass of the proper consistence is obtained.

CONFECTIO AURANTII CORTICIS.

CONFECTION OF ORANGE PEEL.

Take of Sweet Orange Peel, recently separated from the fruit by grating, twelve troyounces;
Sugar thirty-six troyounces.

Beat the Orange Peel with the Sugar, gradually added, until they are thoroughly mixed.

CONFECTIO OPII.

CONFECTION OF OPIUM.

Take of Opium, in fine powder, two hundred and seventy grains;
Aromatic Powder six troyounces;
Clarified Honey fourteen troyounces.

Rub the Opium with the Aromatic Powder; then add the Honey, and beat the whole together until thoroughly mixed.

CONFECTIO ROSÆ.

CONFECTION OF ROSE.

Take of Red Rose, in fine powder, four troyounces;
Sugar, in fine powder, thirty troyounces;
Clarified Honey six troyounces;
Rose Water eight fluidounces.

Rub the Rose with the Rose Water heated to 150°; then gradually add the Sugar and Honey, and beat the whole together until thoroughly mixed.

CONFECTIO SENNÆ.

CONFECTION OF SENNA.

Take of Senna, in fine powder, eight troyounces;
Coriander, in fine powder, four troyounces;
Purging Cassia, finely bruised, sixteen troyounces;
Tamarind ten troyounces;
Prune, sliced, seven troyounces;
Fig, bruised, twelve troyounces;
Sugar, in coarse powder, thirty troyounces;
Water a sufficient quantity.

Place the Purging Cassia, Tamarind, Prune, and Fig, in a close vessel with three pints of Water, and digest for three hours, by means of a water-bath. Separate the coarser portions with the hand, and rub the pulpy mass, first through a coarse hair sieve, and then through a fine one, or through a muslin cloth. Mix the residue with a pint of Water, and, having digested the mixture for a short time, treat it as before, and add the product to the pulpy liquid first obtained. Then, by means of a water-bath, dissolve the Sugar in the pulpy liquid, and evaporate the whole until it weighs eighty-four troyounces. Lastly, add the Senna and Coriander, and incorporate them thoroughly with the other ingredients while yet warm.

The whole should weigh ninety-six troyounces.

CUPRUM.

CUPRUM AMMONIATUM.

AMMONIATED COPPER.

Take of Sulphate of Copper half a troyounce;
Carbonate of Ammonium three hundred and sixty grains.

Rub them together in a glass mortar until effervescence ceases. Then wrap the Ammoniated Copper in bibulous paper, dry it with a gentle heat, and keep it in a well-stopped bottle.

DECOCTA.

DECOCTUM CETRARIÆ.

DECOCTION OF ICELAND MOSS.

Take of Iceland Moss half a troyounce;
Water a sufficient quantity.

Boil the Iceland Moss in a pint of Water for fifteen minutes, strain with compression, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM CHIMAPHILÆ.

DECOCTION OF PIPSISSEWA.

Take of Pipsissewa, bruised, a troyounce;
Water a sufficient quantity.

Boil the Pipsissewa in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM CINCHONÆ FLAVÆ.

DECOCTION OF YELLOW CINCHONA.

Take of Yellow Cinchona, bruised, a troyounce;
Water a sufficient quantity.

Boil the Yellow Cinchona in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM CINCHONÆ RUBRÆ.

DECOCTION OF RED CINCHONA.

Take of Red Cinchona, bruised, a troyounce;
Water a sufficient quantity.

Boil the Red Cinchona in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM CORNÛS FLORIDÆ.

DECOCTION OF DOGWOOD.

Take of Dogwood, bruised, a troyounce;
Water a sufficient quantity.

Boil the Dogwood in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM DULCAMARÆ.

DECOCTION OF BITTERSWEET.

Take of Bittersweet, bruised, a troyounce;
Water a sufficient quantity.

Boil the Bittersweet in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM HÆMATOXYLI.

DECOCTION OF LOGWOOD.

Take of Logwood, rasped, a troyounce;
Water two pints.

Boil down to a pint, and strain.

DECOCTUM HORDEI.

DECOCTION OF BARLEY.

Take of Barley two troyounces;
Water a sufficient quantity.

Having washed away the extraneous matters which adhere to the Barley, boil it with half a pint of Water for a short time, and throw away the resulting liquid. Then, having poured on it four pints of boiling Water, boil down to two pints, and strain.

DECOCTUM QUERCÛS ALBÆ

DECOCTION OF WHITE OAK.

Take of White Oak, bruised, a troyounce;
Water a sufficient quantity.

Boil the White Oak in a pint of Water for half an hour, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM SARSAPARILLÆ COMPOSITUM.

COMPOUND DECOCTION OF SARSAPARILLA.

Take of Sarsaparilla, sliced and bruised, six troyounces;
Bark of Sassafras Root, sliced,
Guaiacum Wood, rasped,
Liquorice Root, bruised, each, a troyounce;
Mezereon, sliced, one hundred and eighty grains;
Water a sufficient quantity.

Boil in four pints of Water for fifteen minutes, then digest for two hours in a covered vessel at about 200°, strain, and add sufficient Water, through the strainer, to make the decoction measure four pints.

DECOCTUM SENEGÆ.

DECOCTION OF SENEKA.

Take of Seneka, bruised, a troyounce;
Water a sufficient quantity.

Boil the Seneka in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DECOCTUM UVÆ URSI.

DECOCTION OF UVA URSI.

Take of Uva Ursi a troyounce;
Water a sufficient quantity.

Boil the Uva Ursi in a pint of Water for fifteen minutes, strain, and add sufficient Water, through the strainer, to make the decoction measure a pint.

DIGITALINUM.

DIGITALINUM.

DIGITALIN.

Take of Digitalis, in moderately fine powder, forty-eight troyounces;
Stronger Alcohol six pints;
Acetic Acid half a fluidounce;
Purified Animal Charcoal one hundred and eighty grains;
Tannic Acid two hundred grains, or a sufficient quantity;
Oxide of Lead, in fine powder, one hundred and twenty grains;
Stronger Ether a fluidounce;
Water of Ammonia,
Diluted Alcohol,
Distilled Water, each, a sufficient quantity.

Mix the Stronger Alcohol with two pints of Distilled Water, moisten the Digitalis with a pint of the mixture, and pack it in a conical percolator; pour on two pints of the mixture, and when the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator to prevent evaporation, set it aside in a moderately warm place for four days. Then, having removed the cork, gradually pour on, first the remainder of the mixture, and then Diluted Alcohol until a gallon of tincture has been obtained. Distil off six pints and a half, add to the residue the Acetic Acid, and one hundred

and twenty grains of the Animal Charcoal, set aside for twenty-four hours, and filter; to the filtered liquid add Water of Ammonia until the acid is almost neutralized, then add the Tannic Acid, previously dissolved in half a pint of Distilled Water, until it ceases to produce a precipitate; collect this upon a filter, wash it with a little Distilled Water, mix it with the Oxide of Lead, and dry the mixture carefully. Rub the residue to powder, mix it with the remainder of the Animal Charcoal, and digest with three ounces of Stronger Alcohol, for one hour, at a temperature of 160°; transfer the mixture to a small filter, wash the insoluble portion with three ounces of warm Stronger Alcohol, evaporate carefully to dryness, rub the residue into powder, and wash it twice with the Ether, using one-half each time. Lastly, dry it carefully, and preserve it in a well-stopped bottle.

A white or yellowish-white powder, without odour, and having a very bitter taste. It is readily soluble in alcohol and in acids, but nearly insoluble in water and in ether. Its solution in muriatic acid has a yellow colour, which soon changes to green. Heated upon platinum foil, it burns without residue.

EMPLASTRA.

EMPLASTRUM ACONITI

ACONITE PLASTER.

Take of Aconite Root, in fine powder, sixteen troy ounces;

Alcohol,

Resin Plaster, each, a sufficient quantity.

Moisten the Aconite Root with six fluidounces of Alcohol, and pack it in a conical percolator. Cover the surface with a disc of paper, and pour upon it ten fluidounces of Alcohol. When the liquid begins to drop, cork the percolator, and, having closely covered it to prevent evaporation, set it aside in a moderately warm place for four days. Then remove the cork, and gradually pour on Alcohol until two pints of tincture have been obtained, or the Aconite Root is exhausted. Distil off a pint and a half of alcohol, and evaporate the residue to a soft uniform extract, by means of a water-bath. Add to this sufficient Resin Plaster, previously melted, to make the mixture weigh sixteen troyounces, and then mix them thoroughly.

EMPLASTRUM AMMONIACI

AMMONIAC PLASTER.

Take of Ammoniac five troyounces;
Diluted Acetic Acid half a pint.

Dissolve the Ammoniac in the Diluted Acetic Acid, and strain; then evaporate the solution by means of a water-bath, stirring constantly, until it acquires the proper consistence.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO.

PLASTER OF AMMONIAC WITH MERCURY.

Take of Ammoniac twelve troyounces;
Mercury three troyounces;
Olive Oil sixty grains;
Sublimed Sulphur eight grains.

Heat the Oil, and gradually add the Sulphur, stirring constantly until they unite; then add the Mercury, and triturate until globules of the metal cease to be visible. Boil the Ammoniac with sufficient water to cover it, until they are thoroughly mixed; then strain through a hair sieve, and evaporate, by means of a water-bath, until a small portion taken from the vessel hardens on cooling. Lastly, add the Ammoniac, while yet hot, gradually to the mixture of Oil, Sulphur, and Mercury, and thoroughly incorporate all the ingredients.

EMPLASTRUM ANTIMONII.

ANTIMONIAL PLASTER.

Take of Tartrate of Antimony and Potassium, in fine powder, a troyounce;
Burgundy Pitch four troyounces;

Melt the Pitch by means of a water-bath, and strain; then add the powder, and stir them well together until the mixture thickens on cooling.

EMPLASTRUM ARNICÆ.

ARNICA PLASTER.

Take of Alcoholic Extract of Arnica a troyounce and a half;
Resin Plaster three troyounces.

Add the Extract to the Plaster, previously melted by means of a water-bath, and mix them thoroughly.

EMPLASTRUM ASSAFŒTIDÆ.

ASSAFETIDA PLASTER.

Take of Assafetida,
Lead Plaster, each, twelve troyounces;
Galbanum,
Yellow Wax, each, six troyounces;
Alcohol three pints.

Dissolve the Assafetida and Galbanum in the Alcohol by means of a water-bath, strain the liquid while hot, and evaporate to the consistence of honey; then add the Plaster and Wax, previously melted together, stir the mixture well, and evaporate to the proper consistence.

EMPLASTRUM BELLADONNÆ.

BELLADONNA PLASTER.

Take of Belladonna Root, in fine powder, sixteen troyounces;
Alcohol,
Resin Plaster, each, a sufficient quantity.

Moisten the Belladonna Root with six fluidounces of Alcohol, pack it in a conical percolator, and, having covered the surface with a disc of paper, pour on ten fluidounces of Alcohol. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, set it aside for four days.

Then remove the cork, and gradually pour on Alcohol until two pints of tincture have slowly passed. Distil off by means of a water-bath a pint and a half of Alcohol; in

troduce the residue into a two-pint capsule, and evaporate on a water-bath to a soft, uniform extract; ascertain its weight, and, having added sufficient Resin Plaster, previously melted, to make the whole weigh sixteen troyounces, mix them thoroughly.

EMPLASTRUM FERRI.

IRON PLASTER.

Take of Subcarbonate of Iron three troyounces;
Lead Plaster twenty-four troyounces;
Burgundy Pitch six troyounces.

To the Lead Plaster and Burgundy Pitch, previously melted together, add the Subcarbonate of Iron, and stir constantly until the mixture thickens on cooling.

EMPLASTRUM GALBANI COMPOSITUM.

COMPOUND GALBANUM PLASTER.

Take of Galbanum eight troyounces;
Turpentine a troyounce;
Burgundy Pitch three troyounces;
Lead Plaster thirty-six troyounces.

To the Galbanum and Turpentine, previously melted together and strained, add first the Burgundy Pitch, and then the Lead Plaster, melted over a gentle fire, and mix the whole together.

EMPLASTRUM HYDRARGYRI.

MERCURIAL PLASTER.

Take of Mercury six troyounces;
Olive Oil,
Resin, each, two troyounces;
Lead Plaster twelve troyounces.

Melt the Oil and Resin together, and, when they have become cool, rub the Mercury with them until globules of the metal cease to be visible. Then gradually add the Lead Plaster, previously melted, and mix the whole together.

EMPLASTRUM OPII.

OPIUM PLASTER.

Take of Extract of Opium a troyounce;
Burgundy Pitch three troyounces;
Lead Plaster twelve troyounces;
Water a sufficient quantity.

Mix the Extract with three fluidounces of Water, and evaporate, by means of a water-bath, to a fluidounce and a half. Add this to the Burgundy Pitch and Lead Plaster, melted together by means of a water-bath, and continue the heat for a short time, stirring constantly, that the moisture may be evaporated.

EMPLASTRUM PICIS BURGUNDICÆ.

BURGUNDY PITCH PLASTER.

Take of Burgundy Pitch seventy-two troyounces;
Yellow Wax six troyounces.

Melt them together, strain, and stir constantly until they thicken on cooling.

EMPLASTRUM PICIS CANADENSIS.

CANADA PITCH PLASTER.

HEMLOCK PITCH PLASTER.

Take of Canada Pitch seventy-two troyounces;
Yellow Wax six troyounces.

Melt them together, strain, and stir constantly until they thicken on cooling.

EMPLASTRUM PICIS CUM CANTHARIDE.

PLASTER OF PITCH WITH CANTHARIDES.

Take of Burgundy Pitch forty-eight troyounces;
Cerate of Cantharides four troyounces.

Heat the Cerate as nearly as possible to 212° in a water-bath, and, having continued the heat for fifteen minutes, strain the Cerate, add the Pitch, and, melting them together by means of a water-bath, stir constantly until the mixture thickens on cooling.

EMPLASTRUM PLUMBI.

LEAD PLASTER.

Take of Oxide of Lead, in fine powder, thirty troyounces;
Olive Oil fifty-six troyounces;
Water a sufficient quantity.

Rub the Oxide of Lead with half its weight of the Oil; add the mixture to the remainder of the Oil, contained in a suitable vessel of a capacity equal to twice the bulk of the ingredients. Then add half a pint of boiling Water, and boil the whole together until a plaster is formed;

adding from time to time, during the process, a little boiling Water, as that first added is consumed.

EMPLASTRUM RESINÆ.

RESIN PLASTER.

ADHESIVE PLASTER.

Take of Resin, in fine powder, six troyounces;
Lead Plaster thirty-six troyounces.

To the Lead Plaster, melted over a gentle fire, add the Resin, and mix them.

EMPLASTRUM SAPONIS.

SOAP PLASTER.

Take of Soap, sliced, four troyounces;
Lead Plaster thirty-six troyounces;
Water a sufficient quantity.

Rub the Soap with Water until brought to a semi-liquid state; then mix it with the Lead Plaster, previously melted, and boil to the proper consistence.

EXTRACTA.

In preparing the Extracts, unless otherwise directed, evaporate as quickly as possible, in a broad, shallow vessel, by means of a water-bath, until they have acquired the consistence proper for forming pills; and, towards the end of the process, stir them constantly with a spatula.

Sprinkle upon the softer Extracts a small quantity of Alcohol.

EXTRACTUM ACONITI.

EXTRACT OF ACONITE.

Extractum Aconiti Alcoholicum, *Pharm.*, 1860.

Take of Aconite Leaves, recently dried and in fine powder, twelve troyounces;
Alcohol a pint;
Diluted Alcohol a sufficient quantity.

Introduce the powder, previously mixed with one-third of the Alcohol, into a conical percolator, and pour upon it the remainder of the Alcohol. When the liquid has all been absorbed by the powder, pour on Diluted Alcohol until a pint of tincture has been obtained. Set this aside in a warm place, and allow it to evaporate spontaneously until reduced to three fluidounces. Continue the percolation with Diluted Alcohol until two pints more of tincture have passed, or until the powder is exhausted; then evaporate, by means of a water-bath, at a temperature not exceeding 160°, to the consistence of syrup, and add the three fluidounces of tincture first obtained. Lastly, continue the evaporation, at a temperature not exceeding 120°, until the whole is reduced to the proper consistence.

EXTRACTUM ARNICÆ.

EXTRACT OF ARNICA.

Extractum Arnicæ Alcoholicum, *Pharm.*, 1860.

Take of Arnica, in moderately coarse powder, twenty-four troyounces;
Alcohol four pints;

Water two pints;

Diluted Alcohol a sufficient quantity.

Mix the Alcohol and Water, and moisten the powder with a pint of the mixture; then pack it firmly in a cylindrical percolator, and gradually pour on the remainder of the mixture. Continue the percolation with Diluted Alcohol until six pints of tincture have passed. Lastly, evaporate, by means of a water-bath, to the proper consistence.

EXTRACTUM BELLADONNÆ.

EXTRACT OF BELLADONNA.

Take of Belladonna Leaves, fresh, twelve troyounces.

Bruise the Leaves in a stone mortar, sprinkling on them a little water, and express the juice; then, having heated this to the boiling point, strain, and evaporate to the proper consistence.

EXTRACTUM BELLADONNÆ ALCOHOLICUM.

ALCOHOLIC EXTRACT OF BELLADONNA.

Take of Belladonna Leaves, in fine powder, twenty-four troyounces;

Alcohol four pints;

Water two pints;

Diluted Alcohol a sufficient quantity.

Mix the Alcohol and Water, and moisten the powder with a pint of the mixture; then pack it firmly in a conical percolator, and gradually pour upon it the remainder of the mixture. Continue the percolation with Diluted Alcohol until six pints of tincture have passed. Lastly, evaporate, by means of a water-bath, to the proper consistence.

EXTRACTUM CANNABIS AMERICANÆ.

EXTRACT OF AMERICAN HEMP.

Take of American Hemp, in moderately fine powder, twelve troyounces;

Alcohol a sufficient quantity.

Moisten the Hemp with six fluidounces of Alcohol, pack it in a conical percolator, cover the surface with a disc of paper, and pour on six fluidounces of Alcohol. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, to prevent evaporation, set it aside in a moderately warm place for four days. Then, having removed the cork, gradually pour Alcohol upon the surface until two pints of tincture have been obtained, or until the Hemp is exhausted. Lastly, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM CANNABIS INDICÆ.

EXTRACT OF INDIAN HEMP.

Take of Indian Hemp, in moderately fine powder, twelve troyounces;

Alcohol a sufficient quantity.

Moisten the Hemp with six fluidounces of Alcohol, pack it in a conical percolator, cover the surface with a disc of paper, and pour on six fluidounces of Alcohol. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, to prevent evaporation, set it aside in a moderately warm place for four days. Then, having removed the cork,

gradually pour Alcohol upon the surface until two pints of tincture have been obtained, or until the Hemp is exhausted. Lastly, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM CINCHONÆ.

EXTRACT OF CINCHONA.

Take of Yellow Cinchona, in fine powder, twelve troyounces;
Alcohol three pints;
Water a sufficient quantity.

Mix the powder with twenty fluidounces of the Alcohol, and allow the mixture to stand for four days; then introduce it into a conical glass percolator, and gradually pour upon it the remainder of the Alcohol. When the liquid ceases to pass, pour upon the residue sufficient Water to keep its surface covered, until three pints of tincture have passed. Set this portion aside, and continue the percolation until six pints of infusion are obtained. Distil off the alcohol from the tincture, and evaporate the infusion until the liquids respectively are brought to the consistence of thin honey; then mix them, and, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM COLCHICI ACETICUM.

ACETIC EXTRACT OF COLCHICUM.

Take of Colchicum Root, in moderately fine powder, twelve troyounces;
Acetic Acid four fluidounces;
Water a sufficient quantity.

To the Acetic Acid add a pint of Water, and mix the resulting liquid with the Colchicum Root. Transfer the mixture to a conical glass percolator, and pour Water gradually upon it, until the liquid passes with little or no taste. Lastly, evaporate the liquid, in a porcelain vessel, by means of a water-bath, to the proper consistence.

EXTRACTUM COLOCYNTHIDIS.

EXTRACT OF COLOCYNTH.

Extractum Colocynthidis Alcoholicum, *Pharm.*, 1860.

Take of Colocynth forty-eight troyounces;

Diluted Alcohol a sufficient quantity.

Dry the Colocynth, and, having removed the seeds, and reduced it to coarse powder by grinding or bruising, macerate it in eight pints of Diluted Alcohol for four days, with occasional stirring; then express strongly, and strain through flannel. Pack the residue, previously broken up with the hands, firmly in a cylindrical percolator, cover it with the strainer, and pour Diluted Alcohol upon it, until the tincture and expressed liquid, taken together, measure sixteen pints. Mix the tincture with the expressed liquid, and, having recovered from the mixture ten pints of alcohol by distillation, evaporate the residue to dryness by means of a water-bath. Lastly, reduce the dry mass to powder, and keep it in a well-stopped bottle.

The Extract obtained by this process weighs about seven troyounces.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM.

COMPOUND EXTRACT OF COLOCYNTH.

Take of Extract of Colocynth, in fine powder, three troyounces and a half;

Purified Aloes, in fine powder, twelve troyounces;

Resin of Scammony, in fine powder, three troyounces;

Cardamom, in fine powder, a troyounce and a half;

Soap, in fine powder, three troyounces.

Mix the powders thoroughly, and keep the mixture in a well-stopped bottle.

EXTRACTUM CONII.

EXTRACT OF CONIUM.

Take of Conium Leaves, fresh, twelve troyounces.

Bruise the Leaves in a stone mortar, sprinkling on them a little water, and express the juice; then, having heated this to the boiling point, filter it, and evaporate to the proper consistence, either in a vacuum with the aid of heat, or in shallow vessels, at the ordinary temperature, by means of a current of air, directed over the surface of the liquid.

EXTRACTUM CONII ALCOHOLICUM.

ALCOHOLIC EXTRACT OF CONIUM.

Take of Conium Leaves, recently dried and in fine powder, twelve troyounces;

Alcohol a pint;

Diluted Alcohol a sufficient quantity.

Introduce the powder, previously mixed with one-third of the Alcohol, into a conical percolator, and pour upon it the remainder of the Alcohol. When the liquid has all been absorbed by the powder, pour Diluted Alcohol upon it until a pint of tincture has been obtained. Set this aside in a warm place, and allow it to evaporate spontaneously until reduced to three fluidounces. Continue the percolation with Diluted Alcohol until two pints more of tincture have passed, or until the powder is exhausted; then evaporate this liquid by means of a water-bath, at a temperature not exceeding 160°, to the consistence of syrup. To this add the three fluidounces of tincture first obtained, and continue the evaporation, at a temperature not exceeding 120°, until the whole is reduced to the proper consistence.

EXTRACTUM DIGITALIS.

EXTRACT OF DIGITALIS.

Extractum Digitalis Alcoholicum, *Pharm.*, 1860.

Take of Digitalis, recently dried and in fine powder, twelve troyounces;

Alcohol a pint;

Diluted Alcohol a sufficient quantity.

Introduce the powder, previously mixed with one-third of the Alcohol, into a percolator, and pour upon it the remainder of the Alcohol. When the liquid has all been absorbed by the powder, pour Diluted Alcohol upon it until a pint of tincture has been obtained. Set this aside in a warm place, and allow it to evaporate sponta-

neously until reduced to three fluidounces. Continue the percolation with Diluted Alcohol until two pints more of tincture have passed, or until the powder is exhausted; then evaporate this liquid, by means of a water-bath, at a temperature not exceeding 160°, to the consistence of syrup. To this add the three fluidounces of tincture first obtained, and continue the evaporation, at a temperature not exceeding 120°, until the whole is reduced to the proper consistence.

EXTRACTUM DULCAMARÆ.

EXTRACT OF BITTERSWEET.

Take of Bittersweet, in moderately fine powder, twelve troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the Bittersweet with four fluidounces of Diluted Alcohol, pack it in a conical percolator, and pour Diluted Alcohol gradually upon it until the tincture passes but slightly imbued with the properties of the Bittersweet. Distil off the alcohol from the tincture until reduced to one-half; then strain, and, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM GENTIANÆ.

EXTRACT OF GENTIAN.

Take of Gentian, in moderately coarse powder, twelve troyounces;
Water a sufficient quantity.

Moisten the Gentian with four fluidounces of Water,

pack it in a conical percolator, and gradually pour Water upon it until the infusion passes but slightly imbued with the properties of the Gentian. Boil the liquid to three-fourths of its bulk; then strain, and, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM HÆMATOXYLI.

EXTRACT OF LOGWOOD.

Take of Logwood, rasped, twelve troyounces;
Water eight pints.

Mix, and, having boiled to four pints, strain the decoction while hot; then evaporate to dryness.

EXTRACTUM HELLEBORI.

EXTRACT OF BLACK HELLEBORE.

Extractum Hellebori Alcoholicum, *Pharm.*, 1860.

Take of Black Hellebore, recently dried and in fine powder, twelve troyounces;
Alcohol a pint;
Diluted Alcohol a sufficient quantity.

Introduce the powder, previously mixed with one-third of the Alcohol, into a conical percolator, and pour upon it the remainder of the Alcohol. When the liquid has all been absorbed by the powder, pour on Diluted Alcohol until a pint of tincture has been obtained. Set this aside in a warm place, and allow it to evaporate spontaneously, until reduced to three fluidounces. Continue the percolation with Diluted Alcohol, until two pints more of tincture

have passed, or until the powder is exhausted; then evaporate, by means of a water-bath, at a temperature not exceeding 160°, to the consistence of syrup. To this add the three fluidounces of tincture first obtained, and continue the evaporation at a temperature not exceeding 120°, until the whole is reduced to the proper consistence.

EXTRACTUM HYOSCYAMI.

EXTRACT OF HYOSCYAMUS.

Take of Hyoscyamus Leaves, fresh, twelve troyounces.

Bruise the Leaves in a stone mortar, sprinkling on them a little water, and express the juice; then, having heated this to the boiling point, strain, and evaporate to the proper consistence.

EXTRACTUM HYOSCYAMI ALCOHOLICUM.

ALCOHOLIC EXTRACT OF HYOSCYAMUS.

Take of Hyoscyamus Leaves, recently dried and in moderately fine powder, twenty-four troyounces;
Alcohol four pints;
Water two pints;
Diluted Alcohol a sufficient quantity.

Mix the Alcohol and Water, and moisten the powder with a pint of the mixture; then pack it firmly in a conical percolator, and gradually pour upon it the remainder of the mixture. Continue the percolation with Diluted Alcohol, until the tincture measures six pints. Lastly, evaporate, by means of a water-bath, to the proper consistence.

EXTRACTUM IGNATIÆ.

EXTRACT OF IGNATIA.

Extractum Ignatiæ Alcoholicum, *Pharm.*, 1860.

Take of Ignatia, in fine powder, twelve troyounces;
Alcohol a sufficient quantity.

Mix the Ignatia with four fluidounces of Alcohol, and allow the mixture to stand for an hour. Then introduce it into a cylindrical percolator, press it firmly, and gradually pour Alcohol upon it, until three pints of tincture have slowly passed. Distil off the Alcohol, by means of a water-bath, until the tincture is reduced to half a pint, and evaporate this to the proper consistence.

EXTRACTUM JALAPÆ.

EXTRACT OF JALAP.

Take of Jalap, in moderately fine powder, twelve troyounces;
Alcohol four pints;
Water a sufficient quantity.

Introduce the powder, previously mixed with three fluidounces of Alcohol, into a conical percolator, and gradually pour upon it the remainder of the Alcohol. When the liquid ceases to pass, pour sufficient Water upon the residue to keep its surface covered, until four pints of tincture have passed. Set this portion aside, and continue the percolation until six pints of infusion have been obtained. Distil off the alcohol from the tincture, and evaporate the infusion, until the liquids respectively have been brought to the consistence of thin honey; then mix them, and evaporate to the proper consistence.

EXTRACTUM JUGLANDIS.

EXTRACT OF BUTTERNUT.

Take of Butternut, in moderately coarse powder, twelve troyounces;

Water a sufficient quantity.

Moisten the Butternut with four fluidounces of Water, pack it in a conical percolator, and gradually pour Water upon it, until the infusion passes but slightly imbued with the properties of the Butternut. Boil the liquid to three-fourths of its bulk; then strain, and, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM KRAMERIÆ.

EXTRACT OF RHATANY.

Take of Rhatany, in moderately fine powder, twelve troyounces;

Water a sufficient quantity.

Moisten the powder with four fluidounces of Water, pack it in a conical percolator, and gradually pour Water upon it, until the infusion passes but slightly imbued with the astringency of the Rhatany. Heat the liquid to the boiling point, strain, and, by means of a water-bath, at a temperature not exceeding 160°, evaporate to the proper consistence.

EXTRACTUM NUCIS VOMICÆ.

EXTRACT OF NUX VOMICA.

Extractum Nucis Vomicæ Alcoholicum, *Pharm.*, 1860.

Take of Nux Vomica, in fine powder, twelve troyounces;

Alcohol a sufficient quantity.

Mix the Nux Vomica with four fluidounces of Alcohol, and allow the mixture to stand for an hour. Then introduce it into a cylindrical percolator, and gradually pour Alcohol upon it until the tincture passes without bitterness. Distil off the alcohol, by means of a water-bath, until the tincture is reduced to half a pint, and evaporate this to the proper consistence.

EXTRACTUM OPII.

EXTRACT OF OPIUM.

Take of Opium twelve troyounces;
Water five pints.

Cut the Opium into small pieces, macerate it for twenty-four hours in a pint of the Water, and reduce it to a soft mass by trituration. Express the liquid from it, and with each of the four pints of Water remaining, successively treat the residue in the same manner. Having mixed the liquids, filter the mixture, and evaporate, by means of a water-bath, to the proper consistence.

EXTRACTUM PHYSOSTIGMATIS.

EXTRACT OF CALABAR BEAN.

Take of Calabar Bean, in moderately fine powder, twelve troyounces;
Alcohol a sufficient quantity.

Moisten the powder with four fluidounces of Alcohol, pack it in a conical percolator, and pour on half a pint of Alcohol. Cork and closely cover the percolator, and set it aside in a moderately warm place, for four days. Then,

having removed the cork, proceed with the percolation, and gradually pour on Alcohol, until two pints of tincture have been obtained, or the Bean has been exhausted. Distil off a pint and a half of alcohol from the tincture, and evaporate the remainder, by means of a water-bath, to the consistence of a soft extract.

EXTRACTUM PODOPHYLLI.

EXTRACT OF MAY-APPLE.

Take of May-apple, in moderately fine powder, twelve troyounces;
Alcohol two pints;
Diluted Alcohol a sufficient quantity.

Introduce the powder, previously mixed with three fluidounces of Alcohol, into a conical percolator, and pour upon it the remainder of the Alcohol. When the tincture ceases to pass, pour gradually upon the powder sufficient Diluted Alcohol to keep its surface covered, until two pints of tincture have passed. Set this portion aside, and continue the percolation until two pints more of tincture have been obtained. Distil off the alcohol from the tinctures, and evaporate them, until the liquids respectively have been brought to the consistence of thin honey; then mix them, and evaporate to the proper consistence.

EXTRACTUM QUASSIÆ.

EXTRACT OF QUASSIA.

Take of Quassia, in moderately fine powder, welve troyounces;
Water a sufficient quantity.

Moisten the Quassia with four fluidounces of Water, pack it in a conical percolator, and gradually pour Water upon it, until the infusion passes but slightly imbued with the bitterness of the Quassia. Boil the liquid to three-fourths of its bulk; then strain, and, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM RHEI.

EXTRACT OF RHUBARB.

Extractum Rhei Alcoholicum, *Pharm.*, 1860.

Take of Rhubarb, in moderately fine powder, twelve troy-ounces;

Alcohol a pint;

Diluted Alcohol a sufficient quantity.

Moisten the powder with four fluidounces of the Alcohol, pack it in a conical percolator, and gradually pour upon it, first the remainder of the Alcohol, and then Diluted Alcohol, until twelve fluidounces of tincture have been obtained. Set this portion aside in a warm place, and allow it to evaporate spontaneously, until reduced to six fluidounces. Continue the percolation with Diluted Alcohol, until the tincture passes nearly tasteless. Evaporate this in a porcelain vessel, by means of a water-bath, at a temperature not exceeding 160°, to the consistence of syrup. With this mix the tincture first obtained, and continue the evaporation until the mixture is reduced to the proper consistence.

EXTRACTUM SENEGÆ.

EXTRACT OF SENEKA.

Extractum Senegæ Alcoholicum, *Pharm.*, 1860.

Take of Seneka, in moderately fine powder, twelve troy ounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with four fluidounces of Diluted Alcohol, pack it in a conical percolator, and gradually pour upon it Diluted Alcohol until three pints of tincture have passed. Evaporate this, by means of a water-bath, to the proper consistence.

EXTRACTUM STRAMONII FOLIORUM.

EXTRACT OF STRAMONIUM LEAVES.

Extractum Stramonii Alcoholicum, *Pharm.*, 1860.

Take of Stramonium Leaves, recently dried and in fine powder, twelve troyounces;

Alcohol a pint;

Diluted Alcohol a sufficient quantity.

Introduce the powder, previously mixed with one-third of the Alcohol, into a conical percolator, and gradually pour upon it the remainder of the Alcohol. When the liquid has all been absorbed by the powder, pour on Diluted Alcohol until a pint of tincture has been obtained. Set this aside in a warm place, and allow it to evaporate spontaneously until reduced to three fluidounces. Continue the percolation with Diluted Alcohol until two pints more of tincture have passed, or until the powder is exhausted; then evaporate, by means of a water-bath, at a temperature

not exceeding 160°, to the consistence of syrup. With this mix the three fluidounces of tincture first obtained, and continue the evaporation, at a temperature not exceeding 120°, until the mixture is reduced to the proper consistence.

EXTRACTUM STRAMONII SEMINIS.

EXTRACT OF STRAMONIUM SEED.

Take of Stramonium Seed, in moderately fine powder, sixteen troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the Stramonium Seed with four fluidounces of Diluted Alcohol, pack it in a conical percolator, and pour on twelve fluidounces of Diluted Alcohol. When the liquid begins to pass from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, set it aside in a moderately warm place for four days. Then remove the cork, and gradually pour on Diluted Alcohol until two pints of tincture have been obtained, or until the tincture passes but slightly imbued with the properties of the Stramonium. Distil off the alcohol from the tincture, and, by means of a water-bath, evaporate to the proper consistence.

EXTRACTUM TARAXACI.

EXTRACT OF DANDELION.

Take of Dandelion, gathered in September, sixty troyounces.

Slice the Dandelion, and bruise it in a stone mortar,

sprinkling on it a little water, until reduced to a pulp. Then express and strain the juice, and evaporate it in a vacuum, or in a shallow dish over a water-bath, to the proper consistence.

EXTRACTUM VALERIANÆ.

EXTRACT OF VALERIAN.

Extractum Valerianæ Alcoholicum, *Pharm.*, 1860.

Take of Valerian, in fine powder, twelve troyounces;
Alcohol a pint;
Diluted Alcohol a sufficient quantity.

Moisten the powder with four fluidounces of Alcohol, pack it in a percolator, and gradually pour upon it the remainder of the Alcohol. When the liquid has all been absorbed by the powder, pour on Diluted Alcohol until a pint of tincture has been obtained. Set this aside in a warm place, and allow it to evaporate spontaneously until reduced to three fluidounces. Continue the percolation with Diluted Alcohol until two pints more of tincture have passed, and evaporate, by means of a water-bath, to the consistence of syrup. Lastly, mix the two liquids, and continue the evaporation, at a temperature not exceeding 120°, until the mixture is reduced to the proper consistence.

EXTRACTA FLUIDA.

Unless otherwise directed, the Fluid Extracts should be prepared according to the following process:

The quantity of powdered material directed to be used in each of the following formulas, with one exception, is sixteen troyounces. This powder is to be moistened with a specified quantity of menstruum, and properly packed in a suitable percolator. The surface of the powder is then to be covered with a disc of paper, and the remaining portion of sixteen fluidounces of menstruum is to be poured upon it. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, to prevent evaporation, set it aside in a moderately warm place for four days.

The cork is then to be removed, more menstruum is to be gradually poured on, and the percolation continued until twenty-four fluidounces have been obtained. Of these the first fourteen fluidounces are to be reserved, and the remainder, having been carefully evaporated to two fluidounces, is to be mixed with the reserved portion, and filtered through paper if necessary.

EXTRACTUM BELLADONNÆ RADICIS FLUIDUM

FLUID EXTRACT OF BELLADONNA ROOT.

Take of Belladonna Root, in moderately fine powder, sixteen troyounces;

Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Belladonna Root with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM BUCHU FLUIDUM.

FLUID EXTRACT OF BUCHU.

Take of Buchu, in moderately fine powder, sixteen troyounces;
Alcohol a sufficient quantity.

Moisten the Buchu with six fluidounces of Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM CALUMBÆ FLUIDUM.

FLUID EXTRACT OF COLUMBO.

Take of Columbo, in fine powder, sixteen troyounces;
Glycerin two fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix the Glycerin with fourteen fluidounces of Alcohol, and, having moistened the Columbo with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation

with a menstruum consisting of two parts of Alcohol and one part of Water.

EXTRACTUM CHIMAPHILÆ FLUIDUM.

FLUID EXTRACT OF PIPSISSEWA.

Take of Pipsissewa, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Pipsissewa with half a pint of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM CIMICIFUGÆ FLUIDUM.

FLUID EXTRACT OF CIMICIFUGA.

Take of Cimicifuga, in very fine powder, sixteen troyounces;
Stronger Alcohol a sufficient quantity.

Moisten the Cimicifuga with four fluidounces of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM CINCHONÆ FLUIDUM.

FLUID EXTRACT OF CINCHONA.

Take of Yellow Cinchona, in very fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Cinchona with five fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Continue the percolation with Diluted Alcohol, until two pints of tincture have been obtained, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM COLCHICI RADICIS FLUIDUM.

FLUID EXTRACT OF COLCHICUM ROOT.

Take of Colchicum Root, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Colchicum Root with five fluidounces of the mixture, proceed according to directions given in the

general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM COLCHICI SEMINIS FLUIDUM.

FLUID EXTRACT OF COLCHICUM SEED.

Take of Colchicum Seed, in fine powder, sixteen troy-ounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Colchicum Seed with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM CONII FRUCTÛS FLUIDUM.

FLUID EXTRACT OF CONIUM SEED.

Take of Conium Seed, in fine powder, sixteen troy-ounces;
Glycerin four fluidounces;
Muriatic Acid one hundred and eighty grains,
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Conium Seed with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add the Muriatic Acid and one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM CORNÛS FLORIDÆ FLUIDUM.

FLUID EXTRACT OF DOGWOOD.

Take of Dogwood, in fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Dogwood with five fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM CUBEBÆ FLUIDUM.

FLUID EXTRACT OF CUBEB.

Take of Cubeb, in moderately fine powder, sixteen troyounces;
Stronger Alcohol a sufficient quantity.

Moisten the Cubeb with six fluidounces of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM DIGITALIS FLUIDUM.

FLUID EXTRACT OF DIGITALIS.

Take of Digitalis, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Digitalis with half a pint of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM DULCAMARÆ FLUIDUM.

FLUID EXTRACT OF BITTERSWEET.

Take of Bittersweet, in moderately coarse powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the

Bittersweet with six fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM ERGOTÆ FLUIDUM.

FLUID EXTRACT OF ERGOT.

Take of Ergot, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Acetic Acid half a fluidounce;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Ergot with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add the Acetic Acid and one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM ERIGERONTIS CANADENSIS FLUIDUM.

FLUID EXTRACT OF CANADA ERIGERON.

Take of Canada Erigeron, in moderately coarse powder, sixteen troyounces;
Alcohol a sufficient quantity.

Moisten the Erigeron with half a pint of Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM GELSEMII FLUIDUM.

FLUID EXTRACT OF YELLOW JASMINE.

Take of Yellow Jasmine, in very fine powder, sixteen troyounces;

Alcohol a sufficient quantity.

Moisten the Yellow Jasmine with four fluidounces of Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM GENTIANÆ FLUIDUM.

FLUID EXTRACT OF GENTIAN.

Take of Gentian, in moderately coarse powder, sixteen troyounces;

Glycerin four fluidounces;

Alcohol,

Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Gentian with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM GERANII FLUIDUM.

FLUID EXTRACT OF GERANIUM.

Take of Geranium, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Geranium with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM GLYCYRRHIZÆ FLUIDUM.

FLUID EXTRACT OF LIQUORICE ROOT.

Take of Liquorice Root, in fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Liquorice Root with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol,

and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM GOSSYPII RADICIS FLUIDUM.

FLUID EXTRACT OF COTTON ROOT.

Take of Bark of Cotton Root, in very fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the powdered bark with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM HYDRASTIS FLUIDUM.

FLUID EXTRACT OF HYDRASTIS.

Take of Hydrastis, in very fine powder, sixteen troyounces;
Glycerin two fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix the Glycerin with fourteen fluidounces of Alcohol, and, having moistened the Hydrastis with four fluidounces of

the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with a menstruum consisting of two parts of Alcohol and one part of Water.

EXTRACTUM HYOSCYAMI FLUIDUM.

FLUID EXTRACT OF HYOSCYAMUS.

Take of Hyoscyamus Leaves, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Hyoscyamus with half a pint of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate before evaporation.

EXTRACTUM IPECACUANHÆ FLUIDUM.

FLUID EXTRACT OF IPECACUANHA.

Take of Ipecacuanha, in fine powder, sixteen troyounces;
Glycerin half a pint;
Stronger Alcohol a pint and a half;
Water twelve fluidounces;
Diluted Alcohol a sufficient quantity.

Mix the Stronger Alcohol and Water, and, having moistened the Ipecacuanha with six fluidounces of the mixture,

pack it firmly in a conical percolator, and pour upon it twelve fluidounces of the mixture. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, set it aside for four days. Then remove the cork, and gradually pour on the remainder of the mixture, and finally Diluted Alcohol, until two pints of tincture have slowly passed. Mix this portion with the Glycerin, and evaporate the mixture, at a temperature not exceeding 140°, to one pint.

EXTRACTUM KRAMERIÆ FLUIDUM.

FLUID EXTRACT OF RHATANY.

Take of Rhatany, in fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Rhatany with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM LUPULINÆ FLUIDUM.

FLUID EXTRACT OF LUPULIN.

Take of Lupulin sixteen troyounces;
Stronger Alcohol a sufficient quantity.

Moisten the Lupulin with six fluidounces of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM MATICO FLUIDUM.

FLUID EXTRACT OF MATICO.

Take of Matico, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Matico with half a pint of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM MEZEREI FLUIDUM.

FLUID EXTRACT OF MEZEREON.

Take of Mezereon, in moderately coarse powder, sixteen troyounces;
Stronger Alcohol a sufficient quantity.

Moisten the Mezereon with six fluidounces of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM PAREIRÆ FLUIDUM.

FLUID EXTRACT OF PAREIRA BRAVA.

Take of Pareira Brava, in fine powder, sixteen troy-ounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Pareira Brava with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM PRUNI VIRGINIANÆ FLUIDUM.

FLUID EXTRACT OF WILD-CHERRY.

Take of Wild-Cherry, in fine powder, sixteen troy-ounces;
Glycerin four fluidounces;
Water half a pint;
Stronger Alcohol a sufficient quantity.

Mix the Glycerin and Water, and, having moistened the Wild-Cherry with half a pint of the mixture, allow it to macerate in a covered vessel for four days; then pack it in a conical glass percolator, and pour on the remainder of the mixture; when this has disappeared from the surface, gradu-

ally pour on Stronger Alcohol until twelve fluidounces have been obtained, and set this portion aside. Continue the percolation with Stronger Alcohol until twenty fluidounces more have been obtained; evaporate to four fluidounces and filter through paper, rinsing the filter with a small portion of Stronger Alcohol, so as to preserve the measure of four fluidounces. Lastly, mix this with the reserved portion, and keep in a well-stopped bottle.

EXTRACTUM RHEI FLUIDUM.

FLUID EXTRACT OF RHUBARB.

Take of Rhubarb, in moderately fine powder, sixteen troyounces;
Glycerin two fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix the Glycerin with fourteen fluidounces of Alcohol, and, having moistened the Rhubarb with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with a menstruum consisting of two parts of Alcohol and one part of Water.

EXTRACTUM RUBI FLUIDUM.

FLUID EXTRACT OF BLACKBERRY.

Take of Blackberry, in fine powder, sixteen troyounces,
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the powdered bark with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM SABINÆ FLUIDUM.

FLUID EXTRACT OF SAVINE.

Take of Savine, in moderately fine powder, sixteen troy ounces;

Stronger Alcohol a sufficient quantity.

Moisten the Savine with half a pint of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM SARSAPARILLÆ COMPOSITUM FLUIDUM.

COMPOUND FLUID EXTRACT OF SARSAPARILLA.

Take of Sarsaparilla, in moderately fine powder, sixteen troyounces;

Liquorice Root, in moderately fine powder,

Sassafras, in moderately fine powder, each, two troyounces;

Mezereon, in moderately fine powder, three hundred and sixty grains;

Glycerin half a pint;

Alcohol,

Water, each, a sufficient quantity.

Mix half a pint of Alcohol with four fluidounces each of Glycerin and Water, and, having moistened, with six fluidounces of the mixture, the powders previously well mixed, proceed according to directions given in the general formula at page 151. Continue the percolation with Diluted Alcohol until two pints have been obtained. Reserve the first twelve fluidounces, and, having added four fluidounces of Glycerin to the remainder of the percolate, carefully evaporate to six fluidounces, and mix with the reserved portion.

EXTRACTUM SARSAPARILLÆ FLUIDUM.

FLUID EXTRACT OF SARSAPARILLA.

Take of Sarsaparilla, in moderately fine powder, sixteen troyounces;

Glycerin half a pint;

Alcohol,

Water, each, a sufficient quantity.

Mix half a pint of Alcohol with four fluidounces each of Glycerin and Water, and, having moistened the Sarsaparilla with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Continue the percolation with Diluted Alcohol until twenty-six fluidounces have been obtained. Reserve the first ten fluidounces, and, having added four fluidounces of Glycerin to the remainder of the percolate, carefully evaporate to six fluidounces, and mix with the reserved portion.

EXTRACTUM SCILLÆ FLUIDUM.

FLUID EXTRACT OF SQUILL.

Take of Squill, in moderately coarse powder, sixteen troyounces;
Glycerin two fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix the Glycerin with fourteen fluidounces of Alcohol, and, having moistened the Squill with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with a menstruum consisting of two parts of Alcohol and one part of Water.

EXTRACTUM SENEGÆ FLUIDUM.

FLUID EXTRACT OF SENEKA.

Take of Seneka, in fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Seneka with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM SENNÆ FLUIDUM.

FLUID EXTRACT OF SENNA.

Take of Senna, in fine powder, sixteen troyounces;
Glycerin half a pint;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol with four fluidounces each of Glycerin and Water, and, having moistened the Senna with half a pint of the mixture, proceed according to directions given in the general formula at page 151. Continue the percolation with Diluted Alcohol until twenty-six fluidounces have been obtained. Reserve the first ten fluidounces, and, having added four fluidounces of Glycerin to the remainder of the percolate, carefully evaporate to six fluidounces, and mix with the reserved portion.

EXTRACTUM SERPENTARIÆ FLUIDUM.

FLUID EXTRACT OF SERPENTARIA.

Take of Serpentaria, in fine powder, sixteen troyounces;
Alcohol a sufficient quantity.

Moisten the Serpentaria with four fluidounces of Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM SPIGELIÆ ET SENNÆ FLUIDUM.

FLUID EXTRACT OF SPIGELIA AND SENNA.

Take of Fluid Extract of Spigelia ten fluidounces;
Fluid Extract of Senna six fluidounces;
Oil of Anise,
Oil of Caraway, each, twenty minims.

Mix the Fluid Extracts, and dissolve the Oils in the mixture.

EXTRACTUM SPIGELIÆ FLUIDUM.

FLUID EXTRACT OF SPIGELIA.

Take of Spigelia, in fine powder, sixteen troyounces;
Glycerin half a pint;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol with four fluidounces each of Glycerin and Water, and, having moistened the Spigelia with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Continue the percolation with Diluted Alcohol until twenty-six fluidounces have been obtained. Reserve the first ten fluidounces, and, having added four fluidounces of Glycerin to the remainder of the percolate, carefully evaporate to six fluidounces, and mix with the reserved portion.

EXTRACTUM STILLINGIÆ FLUIDUM.

FLUID EXTRACT OF STILLINGIA.

Take of Stillingia, in fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix twelve fluidounces of Alcohol, three fluidounces of Glycerin, and one fluidounce of Water, and, having moistened the Stillingia with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM TARAXACI FLUIDUM.

FLUID EXTRACT OF DANDELION.

Take of Dandelion, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Dandelion with four fluidounces of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluid-

ounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM UVÆ URSI FLUIDUM.

FLUID EXTRACT OF UVA URSI.

Take of Uva Ursi, in moderately fine powder, sixteen troyounces;
Glycerin four fluidounces;
Alcohol,
Water, each, a sufficient quantity.

Mix half a pint of Alcohol, three fluidounces of Glycerin, and five fluidounces of Water, and, having moistened the Uva Ursi with half a pint of the mixture, proceed according to directions given in the general formula at page 151. Finish the percolation with Diluted Alcohol, and, having reserved fourteen fluidounces, add one fluidounce of Glycerin to the remainder of the percolate, before evaporation.

EXTRACTUM VALERIANÆ FLUIDUM.

FLUID EXTRACT OF VALERIAN.

Take of Valerian, in fine powder, sixteen troyounces;
Stronger Alcohol a sufficient quantity.

Moisten the Valerian with five fluidounces of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM VERATRI VIRIDIS FLUIDUM.

FLUID EXTRACT OF AMERICAN HELLEBORE.

Take of American Hellebore, in fine powder, sixteen troyounces;

Stronger Alcohol a sufficient quantity.

Moisten the Hellebore with five fluidounces of Stronger Alcohol, and proceed according to directions given in the general formula at page 151.

EXTRACTUM ZINGIBERIS FLUIDUM.

FLUID EXTRACT OF GINGER.

Take of Ginger, in moderately fine powder, sixteen troyounces;

Alcohol a sufficient quantity.

Moisten the Ginger with four fluidounces of Alcohol, and proceed according to directions given in the general formula at page 151.

FERRUM.

FERRI CHLORIDUM.

CHLORIDE OF IRON.

Take of Iron, in the form of wire and cut in pieces, two troyounces;

Muriatic Acid twelve troyounces;

Nitric Acid a troyounce, or a sufficient quantity.

Add the Iron to eight troyounces of the Muriatic Acid, contained in a two-pint flask, and apply a gentle heat until the Acid is saturated, and effervescence has ceased. Filter the solution, add to it the remainder of the Muriatic Acid, heat the mixture nearly to the boiling point, in a four-pint porcelain capsule, and add Nitric Acid in successive portions until red fumes are no longer evolved, and a drop of the liquid ceases to yield a blue precipitate with ferridcyanide of potassium. Transfer the liquid to a smaller capsule, evaporate it by a gentle heat, on a sand-bath, until reduced to eight troyounces and three hundred and sixty grains, and set aside the residue, covered with glass, until it forms a solid, crystalline mass. Lastly, break this into pieces, and keep the fragments in a well-stopped bottle protected from the light.

In orange-yellow, crystalline pieces, very deliquescent, and wholly soluble in water, alcohol, and ether. Its solution in water affords with ammonia a brown precipitate of hydrated sesquioxide of iron, and does not yield a blue one with ferridcyanide of potassium.

FERRI CITRAS.

CITRATE OF IRON.

Take of Solution of Citrate of Iron a convenient quantity.

Evaporate the solution, at a temperature not exceeding 140°, to the consistence of syrup, and spread it on plates of glass, so that the salt, when it is dry, may be obtained in scales.

FERRI ET AMMONII CITRAS.

CITRATE OF IRON AND AMMONIUM.

Take of Solution of Citrate of Iron a pint;
Water of Ammonia six fluidounces.

Mix the Solution of Citrate of Iron with the Water of Ammonia, evaporate the mixture, at a temperature not exceeding 140°, to the consistence of syrup, and spread it on plates of glass, so that the salt, when it is dry, may be obtained in scales.

In garnet-red, translucent scales, having a slightly ferruginous taste, and readily and wholly soluble in water. The solution causes no change in the colour of litmus or turmeric, and does not yield a precipitate with ferrocyanide of potassium. Solution of potassa produces with it a precipitate of sesquioxide of iron, with the evolution of ammonia.

FERRI ET AMMONII SULPHAS.

SULPHATE OF IRON AND AMMONIUM.

AMMONIO-FERRIC ALUM.

Take of Solution of Tersulphate of Iron two pints;
Sulphate of Ammonium four troyounces and a half.

Heat the Solution of Tersulphate of Iron to the boiling point, add the Sulphate of Ammonium, stirring until it is dissolved, and set the liquid aside to crystallize. Wash the crystals quickly with very cold water, wrap them in bibulous paper, and dry them in the open air.

In octahedral crystals, of a pale-violet colour, soluble in one and a half parts of water at 60°, and in less than their weight of boiling

water. Potassa produces with the solution a reddish-brown precipitate. When rubbed with potassa and moistened, the salt emits the odour of ammonia.

FERRI ET AMMONII TARTRAS.

TARTRATE OF IRON AND AMMONIUM.

Take of Tartaric Acid twelve troyounces;
Solution of Tersulphate of Iron two pints and a half;
Carbonate of Ammonium,
Distilled Water, each, a sufficient quantity.

Dissolve six troyounces of the Tartaric Acid in two pints of Distilled Water, and neutralize it carefully by means of Carbonate of Ammonium; then add the remainder of the Acid, dissolved in half a pint of Distilled Water, and mix the solutions. From the Solution of Tersulphate of Iron, prepare the Hydrated Oxide of Iron according to the formula for that substance, and add it gradually to the solution of bitartrate of ammonium, kept at the temperature of 140°, until it is no longer dissolved. Then filter the solution, and evaporate, at a temperature not exceeding 140°, to the consistence of syrup. Lastly, spread it on plates of glass, so that the salt, when it is dry, may be obtained in scales.

In transparent, garnet-red scales, which have a saccharine taste. Reduced to powder it assumes a rust-brown colour. It is slowly soluble in rather more than its weight of water, but insoluble in alcohol and ether. It is neutral to test-paper, and is not precipitated by solutions of the fixed alkalies, nor rendered blue by ferrocyanide of potassium. When incinerated it yields twenty-nine per cent. of sesquioxide of iron.

FERRI ET POTASSII TARTRAS.

TARTRATE OF IRON AND POTASSIUM.

Take of Solution of Tersulphate of Iron a pint;
Bitartrate of Potassium seven troyounces;
Distilled Water four pints.

From the Solution of Tersulphate of Iron, prepare the Hydrated Oxide of Iron according to the formula for that substance. Mix the Bitartrate of Potassium with the Distilled Water, heat the mixture to 140°, and, keeping it at that temperature, gradually add the Hydrated Oxide, frequently stirring, until it ceases to be dissolved. Then filter the solution, evaporate it by means of a water-bath, at a temperature not exceeding 140°, to the consistence of syrup, and spread it upon plates of glass or porcelain, so that the salt, when it is dry, may be obtained in scales.

In transparent scales, of a dark ruby-red colour, and wholly soluble in water. The solution does not change the colour of litmus, and, at common temperatures, does not yield a precipitate with potassa, soda, or ammonia. Ferrocyanide of potassium does not render it blue, unless an acid be added.

FERRI ET QUINIÆ CITRAS.

CITRATE OF IRON AND QUINIA.

Take of Solution of Citrate of Iron ten fluidounces,
Sulphate of Quinia a troyounce;
Diluted Sulphuric Acid,
Water of Ammonia,
Distilled Water, each, a sufficient quantity.

Triturate the Sulphate of Quinia with six fluidounces of

Distilled Water, and, having added sufficient Diluted Sulphuric Acid to dissolve it, cautiously pour into the solution Water of Ammonia, with constant stirring, until in slight excess. Wash the precipitated quinia on a filter, and, having added it to the Solution of Citrate of Iron, maintained at the temperature of 120° by means of a water-bath, stir constantly until it is dissolved. Lastly, evaporate the solution, at a temperature not exceeding 140°, to the consistence of syrup, and spread it on plates of glass, so that the salt, when it is dry, may be obtained in scales.

In thin, transparent scales, varying in colour from reddish-brown to yellowish-brown with a tint of green, according to the thickness of the scales. Its taste is ferruginous and moderately bitter. It is slowly soluble in cold water, more readily so in hot water, but insoluble in ether and officinal alcohol. Ammonia, added to the aqueous solution, deepens its colour to reddish-brown, and causes a whitish, curdy precipitate of quinia; but no sesquioxide of iron is thrown down.

FERRI ET STRYCHNIÆ CITRAS.

CITRATE OF IRON AND STRYCHNIA.

Take of Citrate of Iron and Ammonium five hundred grains;
Strychnia,
Citric Acid, each, five grains;
Distilled Water nine fluidrachms.

Dissolve the Citrate of Iron and Ammonium in a fluidounce, and the Strychnia together with the Citric Acid in a fluidrachm of the Distilled Water. Mix the two solutions, evaporate the mixture by means of a water-bath, at a temperature not exceeding 140°, to the consistence of syrup,

and spread it upon plates of glass, so that the salt, when it is dry, may be obtained in scales.

FERRI FERROCYANIDUM.

FERROCYANIDE OF IRON.

PURE PRUSSIAN BLUE.

Take of Ferrocyanide of Potassium nine troyounces;
Solution of Tersulphate of Iron a pint;
Water three pints.

Dissolve the Ferrocyanide of Potassium in two pints of the Water, and add the solution gradually to the Solution of Tersulphate of Iron, previously diluted with the remainder of the Water, stirring the mixture during the addition. Then filter the liquid, and wash the precipitate on the filter with boiling water until the washings pass nearly tasteless. Lastly, dry it, and rub it into powder.

A tasteless powder, of a rich, deep-blue color, and insoluble in water and the dilute mineral acids. Dilute muriatic acid, after having been boiled on it, yields no precipitate on the addition of ammonia.

FERRI LACTAS.

LACTATE OF IRON.

Take of Lactic Acid a fluidounce;
Iron, in the form of filings, half a troyounce;
Distilled Water a sufficient quantity.

Mix the Acid with a pint of Distilled Water in an iron vessel, add the Iron, and digest the mixture on a water bath, supplying Distilled Water, from time to time, to preserve the measure. When the action has ceased, filter

the solution, while hot, into a porcelain capsule, and set it aside to crystallize. At the end of forty-eight hours, decant the liquid, wash the crystals with a little alcohol, and dry them on bibulous paper.

By evaporating the mother-water in an iron vessel to one-half, filtering it while hot, and setting the liquid aside, more crystals may be obtained.

In greenish-white, crystalline crusts or grains, of a mild, sweetish, ferruginous taste, soluble in forty-eight parts of cold, and twelve of boiling water, but insoluble in alcohol. Exposed to heat it froths up, gives out thick, white, acid fumes, and becomes black; sesquioxide of iron being left. If it be boiled for fifteen minutes with nitric acid of the specific gravity 1.20, white, granular mucic acid will be deposited on the cooling of the liquid.

FERRI OXALAS.

OXALATE OF IRON.

Take of Sulphate of Iron two troyounces;
Oxalic Acid four hundred and thirty-six grains;
Distilled Water a sufficient quantity.

Dissolve the Sulphate of Iron in thirty fluidounces, and the Oxalic Acid in fifteen fluidounces of Distilled Water. Filter the solutions, and, having mixed them with agitation, set aside the mixture until the precipitate is deposited. Decant the clear liquid, wash the precipitate until the washings cease to redden litmus, and dry it with a gentle heat.

A lemon-yellow, crystalline powder, insoluble in water, but soluble in muriatic acid. Heated in contact with the air, it decomposes with a faint combustion, and leaves a residue of not less than forty-eight per cent. of red oxide of iron.

FERRI OXIDUM HYDRATUM.

HYDRATED OXIDE OF IRON.

Take of Solution of Tersulphate of Iron a pint;
Water of Ammonia twenty fluidounces;
Water a sufficient quantity.

To the Water of Ammonia, mixed with two pints of Water, add, stirring it constantly, the Solution of Tersulphate of Iron, previously mixed with two pints of Water. Then pour the whole on a wet muslin strainer, and wash the precipitate with water until the washings pass nearly tasteless. Lastly, mix the precipitate with sufficient Water to make the mixture measure a pint and a half, and transfer it to a wide-mouthed bottle, which must be well stopped.

When Hydrated Oxide of Iron is to be made in haste for use as an antidote, the washing may be performed more quickly, though less perfectly, by pressing the strainer forcibly with the hands until no more liquid passes, and then mixing the precipitate with sufficient Water to make the mixture measure a pint and a half.

Hydrated Oxide of Iron is wholly soluble in muriatic acid without effervescence. If dried at a temperature not exceeding 180°, it will afterwards lose, on exposure to a red heat, eighteen per cent. of water.

FERRI PHOSPHAS.

PHOSPHATE OF IRON.

Take of Sulphate of Iron five troyounces;
Phosphate of Sodium six troyounces;
Water eight pints.

Dissolve the salts separately, each in four pints of the

Water; then mix the solutions, and set aside the mixture until the precipitate has subsided. Lastly, having poured off the supernatant liquid, wash the precipitate with hot water, and dry it with a gentle heat.

A bright slate-coloured powder, insoluble in water, but soluble in the mineral acids. It is dissolved by dilute muriatic acid, forming a solution which yields with ammonia a precipitate, insoluble in an excess of the alkali.

FERRI PYROPHOSPHAS.

PYROPHOSPHATE OF IRON.

Take of Phosphate of Sodium seven troyounces and a half;

Solution of Tersulphate of Iron seven fluidounces, or a sufficient quantity;

Citric Acid two troyounces;

Water of Ammonia five fluidounces and a half, or a sufficient quantity;

Water a sufficient quantity.

Heat the Phosphate of Sodium, in a porcelain capsule, until it undergoes the watery fusion, and continue the heat until it becomes dry. Transfer the dry salt to a shallow iron capsule, and heat it to incipient redness, without fusion. Then dissolve it in three pints of Water, with the aid of heat, and, having filtered the solution and cooled it to the temperature of 50°, add Solution of Tersulphate of Iron until this ceases to produce a precipitate. Stir the mixture thoroughly, and pour it upon a muslin strainer, and, when the precipitate has drained, wash it with water

until the washings pass nearly tasteless, and transfer it to a weighed porcelain capsule.

To the Citric Acid, contained in a suitable vessel, add Water of Ammonia, until the Acid is saturated and dissolved. Then add the solution to the precipitate in the weighed capsule, stir them together, and evaporate until the liquid is reduced to sixteen troyounces. Spread this on plates of glass or porcelain, so that the salt, when it is dry, may be obtained in scales. Lastly, preserve it in a well-stopped bottle, protected from the light.

Pyrophosphate of Iron, thus prepared, is in apple-green scales, having an acidulous, slightly saline taste. It is wholly and freely soluble in water. Ferrocyanide of potassium, when added to the dilute solution, gives rise to a pale-blue colour, but produces no precipitate. This preparation contains forty-eight per cent. of anhydrous pyrophosphate of iron.

FERRI SUBCARBONAS.

SUBCARBONATE OF IRON.

PRECIPITATED CARBONATE OF IRON.

Take of Sulphate of Iron eight troyounces;
Carbonate of Sodium nine troyounces;
Water eight pints.

Dissolve the salts separately, each in four pints of the Water; then mix the solutions thoroughly, and set aside the mixture, until the precipitate has subsided. Then pour off the supernatant liquid, wash the precipitate with water until the washings pass nearly tasteless, and dry it on bibulous paper without heat.

A reddish-brown powder, wholly dissolved by dilute muriatic acid with slight effervescence, forming a solution from which the sesqui-

oxide of iron is completely precipitated by adding ammonia in excess. The liquid which remains is not coloured by hydrosulphuric acid or ferrocyanide of potassium.

FERRI SULPHAS.

SULPHATE OF IRON.

Take of Iron, in the form of wire, and cut in pieces, twelve troyounces;
Sulphuric Acid eighteen troyounces;
Water eight pints.

Mix the Sulphuric Acid and Water, and add the Iron; then heat the mixture until effervescence ceases. Pour off the solution, and, having added thirty grains of Sulphuric Acid, filter through paper, allowing the lower end of the funnel to touch the bottom of the receiving vessel. Place the filtered liquid in a matrass, and evaporate until sufficiently concentrated; then set it aside in a covered vessel to crystallize. Drain the crystals in a funnel, dry them on bibulous paper, and keep them in a well-stopped bottle.

In transparent, bluish-green crystals, which, on exposure to the air, effloresce and change their colour. It is wholly soluble in water; and, when iron is immersed in the solution, a film of copper is not deposited upon its surface.

FERRI SULPHAS EXSICCATA.

DRIED SULPHATE OF IRON.

Take of Sulphate of Iron, in coarse powder, twelve troyounces.

Expose it, in an unglazed earthen vessel, to a moderate heat, with occasional stirring, until it has effloresced; then increase the heat to 300°, and maintain it at about that

temperature until the salt ceases to lose weight. Lastly, reduce the residue to fine powder, and keep it in a well-stopped bottle.

A grayish-white powder, soluble in water with the exception of a small residue, and corresponding, in chemical characters, with Sulphate of Iron.

FERRUM REDACTUM.

REDUCED IRON.

Take of Subcarbonate of Iron thirty troyounces.

Wash the Subcarbonate thoroughly with water until no traces of sulphate of sodium are indicated by the appropriate tests, and calcine it in a shallow vessel until free from moisture. Then spread it upon a tray, made by bending an oblong piece of sheet-iron in the form of an incomplete cylinder, and introduce this into a wrought iron reduction-tube, of about four inches in diameter. Place the reduction-tube in a charcoal furnace; and, by means of a self-regulating hydrogen-generator, pass through it a stream of hydrogen gas, previously purified by bubbling successively through Solution of Subacetate of Lead, diluted with three times its volume of water, and through milk of lime, severally contained in four-pint bottles, about one-third filled. Connect with the further extremity of the reduction-tube a lead tube bent so as to dip into water. Make all the junctions air-tight by appropriate lutes; and, when the hydrogen has passed long enough to fill the whole of the apparatus to the exclusion of atmospheric air, light the fire, and bring that part of the reduction-tube, occupied by the Subcarbonate, to a dull-red

heat, which must be kept up so long as the bubbles of hydrogen, breaking from the water covering the orifice of the lead tube, are accompanied by visible aqueous vapour. When the reduction is completed, remove the fire, and allow the whole to cool to the ordinary temperature, keeping up, during the refrigeration, a moderate current of hydrogen through the apparatus. Withdraw the product from the reduction-tube, and, should any portion of it be black instead of iron-gray, separate such portion for use in a subsequent operation. Lastly, having powdered the Reduced Iron, keep it in a well-stopped bottle.

When thirty troyounces of Subcarbonate of Iron are operated on, the process occupies from five to eight hours.

A tasteless powder, of an iron-gray colour. It is wholly dissolved by a mixture of one part of sulphuric acid and sixty of water, without yielding the odour of hydrosulphuric acid. A small portion of it, struck on an anvil with a smooth hammer, forms a scale having a brilliant metallic lustre. When touched with a lighted taper it ignites, and burns to brown oxide of iron.

GLYCERITA.

GLYCERITUM ACIDI CARBOLICI.

GLYCERITE OF CARBOLIC ACID.

Take of Carbolic Acid two troyounces;
Glycerin half a pint.

Rub them together in a mortar, until the Acid is dissolved.

GLYCERITUM ACIDI GALLICI.

GLYCERITE OF GALLIC ACID.

Take of Gallic Acid two troyounces;
Glycerin half a pint.

Rub them together in a mortar; then transfer to a glass or porcelain capsule, and heat gently until the Acid is dissolved.

GLYCERITUM ACIDI TANNICI.

GLYCERITE OF TANNIC ACID.

Take of Tannic Acid two troyounces;
Glycerin half a pint.

Rub them together in a mortar; then transfer to a glass or porcelain capsule, and heat gently until the Acid is dissolved.

GLYCERITUM PICIS LIQUIDÆ.

GLYCERITE OF TAR.

Take of Tar a troyounce;
Carbonate of Magnesium, in powder, two troyounces;
Glycerin four fluidounces;
Alcohol two fluidounces;
Water ten fluidounces.

Having mixed the Glycerin, Alcohol, and Water, rub the Tar in a mortar, first with the Carbonate of Magnesium, and then with six fluidounces of the mixed liquids gradually added, and strain with expression. Rub the residue in like manner with half the remaining liquid, and strain

as before. Repeat the process again with the remaining liquid. Put the residue into a percolator, add gradually the expressed liquids previously mixed, and afterwards a sufficient quantity of water to make the liquid which passes measure a pint.

GLYCERITUM SODII BORATIS.

GLYCERITE OF BORATE OF SODIUM.

Take of Borate of Sodium two troyounces;
Glycerin half a pint.

Rub them together in a mortar, until the Borate of Sodium is dissolved.

HYDRARGYRUM.

HYDRARGYRI CHLORIDUM CORROSIVUM.

CORROSIVE CHLORIDE OF MERCURY.

CORROSIVE SUBLIMATE.

Take of Mercury twenty-four troyounces;
Sulphuric Acid thirty-six troyounces;
Chloride of Sodium eighteen troyounces.

Boil the Mercury with the Sulphuric Acid, by means of a sand-bath, until a dry, white mass is left. Rub this, when cold, with the Chloride of Sodium in an earthenware mortar; then sublime with a gradually increasing heat.

In colourless crystals or crystalline masses, which are fusible, and sublime without residue. It is entirely soluble in water, alcohol, and ether. Lime-water causes a reddish or yellow precipitate, and ammonia a white one, from its solution.

HYDRARGYRI CHLORIDUM MITE.

MILD CHLORIDE OF MERCURY.

CALOMEL.

Take of Mercury forty-eight troyounces;
Sulphuric Acid thirty-six troyounces;
Chloride of Sodium eighteen troyounces;
Distilled Water a sufficient quantity.

Boil, by means of a sand-bath, twenty-four troyounces of the Mercury with the Sulphuric Acid, until a dry, white mass is left. Rub this, when cold, with the remainder of the Mercury, in an earthenware mortar, until they are thoroughly mixed. Then add the Chloride of Sodium, and, having rubbed it with the other ingredients until globules of Mercury cease to be visible, sublime the mixture into a large chamber so that the sublimate may fall in powder. Wash the sublimed matter with boiling Distilled Water until the washings afford no precipitate with water of ammonia, and dry it.

A white powder, wholly volatilizable by heat, and insoluble in water, alcohol, and ether. With solution of potassa it yields a black precipitate of oxide of mercury, which is reduced by heat to the metallic state. Distilled water, after having been boiled with it, yields no precipitate with ammonia or nitrate of silver.

HYDRARGYRI CYANIDUM

CYANIDE OF MERCURY.

Take of Ferrocyanide of Potassium five troyounces;
Sulphuric Acid four troyounces and one hundred and twenty grains;

Red Oxide of Mercury, in fine powder,
Water, each, a sufficient quantity.

Dissolve the Ferrocyanide of Potassium in twenty fluidounces of Water, and add the solution to the Sulphuric Acid previously diluted with ten fluidounces of Water, and contained in a glass retort. Distil the mixture nearly to dryness, into a receiver containing ten fluidounces of Water and three troyounces of Red Oxide of Mercury. Set aside two fluidounces of the distilled liquid, and to the remainder add, with agitation, sufficient Red Oxide to destroy the odour of hydrocyanic acid. Then filter the solution, and, having added the reserved liquid, evaporate the whole in a dark place, in order that crystals may form. Lastly, dry the crystals, and keep them in a well-stopped bottle, protected from the light.

In white, prismatic crystals, wholly soluble in water. When muriatic acid is added to the solution, hydrocyanic acid is evolved, made evident by its odour, and bichloride of mercury is left, which is entirely volatilized by heat. When Cyanide of Mercury is heated, cyanogen is given off, and a blackish matter, containing globules of mercury, is left.

HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.

Take of Corrosive Chloride of Mercury a troyounce;
Iodide of Potassium a troyounce and one hundred and twenty grains;
Distilled Water a sufficient quantity.

Dissolve the Corrosive Chloride of Mercury in a pint and a half, and the Iodide of Potassium in half a pint of

Distilled Water, and mix the solutions. Collect the precipitate upon a filter, and, having washed it with Distilled Water, dry it with a gentle heat, and keep it in a well-stopped bottle.

A red powder, which becomes yellow when heated, and red again when cold. It is wholly volatilized by heat, condensing in scales, which are at first yellow, but afterwards become red. It is insoluble in water, but is dissolved by boiling alcohol, and by solutions of iodide of potassium and chloride of sodium.

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.

Take of Mercury a troyounce;
Iodine three hundred grains;
Stronger Alcohol a sufficient quantity.

Mix the Mercury and Iodine in a mortar, and, having added half a fluidounce of Stronger Alcohol, triturate the mixture until the ingredients are thoroughly incorporated. Stir the mixture occasionally, and, at the end of two hours, triturate again, with considerable pressure, until it is nearly dry. Then rub it up with Stronger Alcohol, gradually added, until it is reduced to a uniformly thin paste; and, having transferred this to a filter, wash it with Stronger Alcohol until the washings cease to produce a permanent cloudiness when dropped into a large quantity of water. Lastly, dry the Iodide in the dark with a gentle heat, and keep it in a well-stopped bottle, protected from the light.

A greenish-yellow powder, which becomes red when heated. It is insoluble in water and alcohol. Officinal stronger alcohol, when

shaken with it and separated by filtration, gives but a transient cloudiness on being dropped into water, and, when evaporated from a porcelain surface, leaves only a faint-red stain.

HYDRARGYRI OXIDUM FLAVUM.

YELLOW OXIDE OF MERCURY.

Take of Corrosive Chloride of Mercury four troyounces;
Solution of Potassa seventeen troyounces;
Distilled Water a sufficient quantity.

Dissolve the Corrosive Chloride of Mercury in five pints of Distilled Water, and mix with the Solution of Potassa; after the precipitate has subsided, pour off the supernatant liquid, and wash with Distilled Water until the washings cease to be affected by a solution of nitrate of silver. Then dry the precipitate on bibulous paper, in a dark place, and preserve it in bottles, protected from the light.

An orange-yellow powder, which, on being heated, assumes a red colour; then, if the heat be increased, it evolves oxygen, and finally the mercury evaporates, without residue.

HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.

RED PRECIPITATE.

Take of Mercury thirty-six troyounces;
Nitric Acid twenty-four troyounces;
Water two pints.

Dissolve the Mercury, with the aid of a gentle heat, in the Acid and Water previously mixed, and evaporate to dryness. Rub the dry mass into powder, and heat it in a very shallow vessel until red vapours cease to arise.

An orange-red powder, entirely soluble in muriatic acid. When heated it does not emit reddish fumes, but gives off oxygen; while the mercury either runs into globules, or is wholly dissipated.

HYDRARGYRI SULPHAS FLAVA.

YELLOW SULPHATE OF MERCURY.

TURPETH MINERAL.

Take of Mercury four troyounces;
Sulphuric Acid six troyounces.

Mix them in a glass vessel, and boil, by means of a sand-bath, until a dry, white mass remains. Rub this into powder, and throw it into boiling water. Pour off the supernatant liquid, wash the yellow precipitate repeatedly with hot water, and dry it.

A lemon-yellow powder, sparingly soluble in water. It is entirely dissipated by heat, sulphurous acid being evolved, and globules of mercury sublimed.

HYDRARGYRI SULPHURETUM RUBRUM.

RED SULPHURET OF MERCURY.

CINNABAR.

Take of Mercury forty troyounces;
Sublimed Sulphur eight troyounces.

To the Sulphur, previously melted, gradually add the Mercury, with constant stirring, and continue the heat until the mass begins to swell. Then remove the vessel from the fire, and cover it closely to prevent the contents from inflaming. When the mass is cold, rub it into powder, and sublime.

In brilliant, crystalline masses, of a deep-red colour and fibrous texture. It is entirely volatilized by heat. When heated with potassa

it yields globules of mercury. It is not soluble in either nitric or muriatic acid, but is dissolved by a mixture of the two. Acetic acid, which has been digested with it, does not yield a precipitate with iodide of potassium.

HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.

WHITE PRECIPITATE.

Take of Corrosive Chloride of Mercury six troyounces;
Water of Ammonia eight fluidounces;
Distilled Water eight pints.

Dissolve the Corrosive Chloride of Mercury in the Distilled Water, with the aid of heat, and to the solution, when cold, add the Water of Ammonia, frequently stirring. Wash the precipitate with water until the washings become nearly tasteless, and dry it.

In white powder or pulverulent masses, decomposed and entirely dissipated by a strong heat, insoluble in water and alcohol, but dissolved without effervescence by muriatic acid. Acetic acid, which has been digested with it, does not yield with iodide of potassium either a yellow or blue precipitate. It is not blackened when rubbed with lime-water. Heated with solution of potassa, it becomes yellow and evolves ammonia.

HYDRARGYRUM CUM CRETÂ.

MERCURY WITH CHALK.

Take of Mercury three troyounces;
Prepared Chalk five troyounces.

Rub them together until the globules cease to be visible, and the mixture acquires a uniform, gray colour.

A gray powder, partly dissipated by heat. When a small portion is treated with dilute acetic acid in excess, it is partly dissolved,

nothing remaining but mercury in the form of minute globules, visible by the aid of a magnifying glass. The solution, on the addition of muriatic acid, is rendered opalescent; and, when filtered after this addition, and treated with hydrosulphuric acid, does not yield a black precipitate.

INFUSA.

INFUSUM ANGUSTURÆ.

INFUSION OF ANGUSTURA.

Take of Angustura, in moderately coarse powder, half a troyounce;

Water a sufficient quantity.

Moisten the powder with two fluidrachms of Water, pack it firmly in a conical percolator, and gradually pour Water upon it until the filtered liquid measures a pint.

Or, macerate the Angustura in a pint of boiling Water, for two hours, in a covered vessel, and strain.

INFUSUM ANTHEMIDIS.

INFUSION OF CHAMOMILE.

Take of Chamomile half a troyounce;

Boiling Water a pint.

Macerate for ten minutes, in a covered vessel, and strain.

INFUSUM BUCHU.

INFUSION OF BUCHU.

Take of Buchu a troyounce;

Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM CALUMBÆ.

INFUSION OF COLUMBO.

Take of Columbo, in moderately coarse powder, half a troyounce;
Water a sufficient quantity.

Moisten the powder with two fluidrachms of Water, pack it firmly in a conical percolator, and gradually pour Water upon it until the filtered liquid measures a pint. Heat the filtrate to the boiling point, and strain when cold.

Or, macerate the Columbo in a pint of boiling Water, for two hours, in a covered vessel, and strain.

INFUSUM CAPSICI.

INFUSION OF CAPSICUM.

Take of Capsicum, in coarse powder, half a troyounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM CARYOPHYLLI.

INFUSION OF CLOVES.

Take of Cloves, bruised, one hundred and twenty grains;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM CASCARILLÆ.

INFUSION OF CASCARILLA.

Take of Cascarilla, in moderately coarse powder, a troy ounce;
Water a sufficient quantity.

Moisten the powder with half a fluidounce of Water, pack it firmly in a conical percolator, and gradually pour Water upon it until the filtered liquid measures a pint.

Or, macerate the Cascarilla in a pint of boiling Water, for two hours, in a covered vessel, and strain.

INFUSUM CATECHU COMPOSITUM.

COMPOUND INFUSION OF CATECHU.

Take of Catechu, in fine powder, half a troyounce;
Cinnamon, in moderately fine powder, sixty grains;
Boiling Water a pint.

Macerate for an hour, in a covered vessel, and strain.

INFUSUM CINCHONÆ FLAVÆ.

INFUSION OF YELLOW CINCHONA.

Take of Yellow Cinchona, in moderately fine powder, a troyounce;
Aromatic Sulphuric Acid a fluidrachm;
Water a sufficient quantity.

Mix the Acid with a pint of Water. Then moisten the powder with half a fluidounce of the mixture, and, having packed it firmly in a conical glass percolator, gradually pour upon it the remainder of the mixture, and afterwards Water, until the filtered liquid measures a pint.

INFUSUM CINCHONÆ RUBRÆ.

INFUSION OF RED CINCHONA.

Take of Red Cinchona, in moderately fine powder, a troyounce;
Aromatic Sulphuric Acid a fluidrachm;
Water a sufficient quantity.

Mix the Acid with a pint of Water. Then moisten the powder with half a fluidounce of the mixture, and, having packed it firmly in a conical glass percolator, gradually pour upon it the remainder of the mixture, and afterwards Water, until the filtered liquid measures a pint.

INFUSUM DIGITALIS.

INFUSION OF DIGITALIS.

Take of Digitalis, in coarse powder, sixty grains;
Tincture of Cinnamon a fluidounce;
Boiling Water half a pint.

Macerate the Digitalis in the Water, for two hours, in a covered vessel, and strain; then add the Tincture of Cinnamon, and mix.

INFUSUM EUPATORII.

INFUSION OF THOROUGHWORT.

Take of Thoroughwort a troyounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM GENTIANÆ COMPOSITUM.

COMPOUND INFUSION OF GENTIAN.

Take of Gentian, in moderately coarse powder, half a troyounce;
Bitter Orange Peel, in moderately coarse powder,
Coriander, in moderately coarse powder, each, sixty grains;
Alcohol two fluidounces;
Water a sufficient quantity.

Mix the Alcohol with fourteen fluidounces of Water, and, having moistened the mixed powders with three fluidrachms of the menstruum, pack them firmly in a conical percolator, and gradually pour upon them, first the remainder of the menstruum, and then Water, until the filtered liquid measures a pint.

INFUSUM HUMULI.

INFUSION OF HOPS.

Take of Hops half a troyounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM JUNIPERI.

INFUSION OF JUNIPER.

Take of Juniper, bruised, a troyounce;
Boiling Water a pint.

Macerate for an hour, in a covered vessel, and strain.

INFUSUM KRAMERIÆ.

INFUSION OF RHATANY.

Take of Rhatany, in moderately coarse powder, a troyounce;
Water a sufficient quantity.

Moisten the powder with half a fluidounce of Water, and, having packed it firmly in a conical glass percolator, gradually pour Water upon it until the filtered liquid measures a pint.

INFUSUM LINI COMPOSITUM.

COMPOUND INFUSION OF FLAXSEED.

Take of Flaxseed half a troyounce;
Liquorice Root, bruised, one hundred and twenty grains;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM PAREIRÆ.

INFUSION OF PAREIRA BRAVA.

Take of Pareira Brava, bruised, a troyounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM PICIS LIQUIDÆ.

INFUSION OF TAR.

TAR-WATER.

Take of Tar a pint;
Water four pints.

Mix them, and shake the mixture frequently during twenty-four hours. Then pour off the infusion, and filter through paper.

INFUSUM PRUNI VIRGINIANÆ.

INFUSION OF WILD-CHERRY.

Take of Wild-cherry, in fine powder, half a troyounce:
Water a sufficient quantity.

Moisten the powder with six fluidrachms of Water, and let it stand for an hour: pack it firmly in a conical glass percolator, and gradually pour Water upon it until the filtered liquid measures a pint.

INFUSUM QUASSIÆ.

INFUSION OF QUASSIA.

Take of Quassia, rasped, one hundred and twenty grains;
Water a pint.

Macerate for twelve hours, in a covered vessel, and strain.

INFUSUM RHEI.

INFUSION OF RHUBARB.

Take of Rhubarb, bruised, one hundred and twenty grains;
Boiling Water half a pint.

Digest for an hour, in a covered vessel, and strain.

INFUSUM ROSÆ COMPOSITUM.

COMPOUND INFUSION OF ROSE.

Take of Red Rose half a troyounce;
Diluted Sulphuric Acid three fluidrachms;
Sugar, in coarse powder, a troyounce and a half;
Boiling Water two pints and a half.

Pour the Water upon the Rose, in a covered glass or porcelain vessel, add the Acid, and macerate for half an hour; then dissolve the Sugar in the liquid, and strain.

INFUSUM SALVIÆ.

INFUSION OF SAGE.

Take of Sage half a troyounce;
Boiling Water a pint.

Macerate for half an hour, in a covered vessel, and strain

INFUSUM SENNÆ.

INFUSION OF SENNA.

Take of Senna a troyounce;
Coriander, bruised, sixty grains;
Boiling Water a pint.

Macerate for an hour, in a covered vessel, and strain.

INFUSUM SERPENTARIÆ.

INFUSION OF SERPENTARIA.

Take of Serpentaria, in moderately coarse powder, half a troyounce;
Water a sufficient quantity.

Moisten the powder with two fluidrachms of Water, pack it firmly in a conical percolator, and gradually pour Water upon it until the filtered liquid measures a pint.

Or, macerate the Serpentaria in a pint of boiling Water, for two hours, in a covered vessel, and strain.

INFUSUM SPIGELIÆ.

INFUSION OF SPIGELIA.

Take of Spigelia half a troyounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM TABACI.

INFUSION OF TOBACCO.

Take of Tobacco sixty grains;
Boiling Water a pint.

Macerate for an hour, in a covered vessel, and strain.

INFUSUM TARAXACI.

INFUSION OF DANDELION.

Take of Dandelion, bruised, two troyounces;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

INFUSUM VALERIANÆ.

INFUSION OF VALERIAN.

Take of Valerian, in moderately coarse powder, half a troyounce;
Water a sufficient quantity.

Moisten the powder with two fluidrachms of Water, pack it firmly in a conical percolator, and gradually pour Water upon it until the filtered liquid measures a pint.

Or, macerate the Valerian in a pint of boiling Water, for two hours, in a covered vessel, and strain.

INFUSUM ZINGIBERIS.

INFUSION OF GINGER.

Take of Ginger, bruised, half a troyounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

LINIMENTA.

LINIMENTUM ACONITI.

LINIMENT OF ACONITE.

Take of Aconite Root, in fine powder, eight troyounces;
Glycerin a fluidounce;
Alcohol a sufficient quantity.

Moisten the powder with four fluidounces of Alcohol, and let it macerate for twenty-four hours; then pack

it in a conical percolator, and gradually pour Alcohol upon it until two pints of tincture have been obtained. Distil off a pint and a half of alcohol, and evaporate the remainder until it measures seven fluidounces; to this add the Glycerin, and mix them thoroughly.

LINIMENTUM AMMONIÆ.

LINIMENT OF AMMONIA.

Take of Water of Ammonia a fluidounce;
Olive Oil two troyounces.
Mix them.

LINIMENTUM CALCIS.

LIME LINIMENT.

Take of Solution of Lime eight fluidounces;
Flaxseed Oil seven troyounces.
Mix them.

LINIMENTUM CAMPHORÆ.

LINIMENT OF CAMPHOR.

Take of Camphor three troyounces;
Olive Oil twelve troyounces.
Dissolve the Camphor in the Oil.

LINIMENTUM CANTHARIDIS.

LINIMENT OF CANTHARIDES.

Take of Cantharides, in fine powder, a troyounce;
Oil of Turpentine half a pint.
Digest the Cantharides with the Oil for three hours, in a close vessel, by means of a water-bath, and strain.

LINIMENTUM CHLOROFORMI.

LINIMENT OF CHLOROFORM.

Take of Purified Chloroform three troyounces;
Olive Oil four troyounces.
Mix them.

LINIMENTUM PLUMBI SUBACETATIS.

LINIMENT OF SUBACETATE OF LEAD.

Take of Olive Oil three troyounces;
Solution of Subacetate of Lead two troyounces.
Mix them.

LINIMENTUM SAPONIS.

SOAP LINIMENT.

Take of Soap, in shavings, four troyounces;
Camphor two troyounces;
Oil of Rosemary half a fluidounce;
Water six fluidounces;
Alcohol two pints.

Digest the Soap in the Water, until it is dissolved; dissolve the Camphor and Oil in the Alcohol; mix the solutions, and filter through paper.

LINIMENTUM TEREBINTHINÆ.

LINIMENT OF TURPENTINE.

Take of Resin Cerate twelve troyounces;
Oil of Turpentine half a pint.

Add the Oil to the Cerate previously melted, and mix them.

LIQUORES.

LIQUOR AMMONII ACETATIS.

SOLUTION OF ACETATE OF AMMONIUM.

SPIRIT OF MINDERERUS.

Take of Diluted Acetic Acid two pints;

Carbonate of Ammonium a sufficient quantity.

Add the Carbonate gradually to the Acid until the latter is neutralized, and filter. This preparation, when dispensed, should be freshly made.

Solution of Acetate of Ammonium may also be prepared by mixing together the following solutions.

Take of Carbonate of Ammonium six hundred and forty grains;

Distilled Water a sufficient quantity.

Dissolve the Carbonate of Ammonium in twelve fluidounces of Distilled Water, and filter through paper, adding a sufficient quantity of Distilled Water, through the filter, to make the solution measure a pint.

Take of Acetic Acid four fluidounces;

Distilled Water twelve fluidounces.

Mix them.

These solutions must be kept in well-stopped bottles, and mixed in equal quantities when dispensed.

A colourless liquid, which is not darkened by the action of hydrosulphuric acid, and does not yield a precipitate with nitrate of silver or chloride of barium.

LIQUOR ARSENICI CHLORIDI.

SOLUTION OF CHLORIDE OF ARSENIC.

Take of Arsenious Acid, in small pieces, sixty-four grains;
Muriatic Acid two fluidrachms;
Distilled Water a sufficient quantity.

Boil the Arsenious Acid with the Muriatic Acid and four fluidounces of Distilled Water, until the Arsenious Acid is entirely dissolved, and, when the solution is cold, add enough Distilled Water to make it measure a pint.

LIQUOR ARSENICI ET HYDRARGYRI IODIDI.

SOLUTION OF IODIDE OF ARSENIC AND MERCURY.

Take of Iodide of Arsenic,
Red Iodide of Mercury, each, thirty-five grains;
Distilled Water half a pint.

Rub the Iodides with half a fluidounce of the Water, and, when they are dissolved, add the remainder of the Water, and filter through paper.

LIQUOR BARII CHLORIDI.

SOLUTION OF CHLORIDE OF BARIUM

Take of Chloride of Barium a troyounce;
Distilled Water three fluidounces.

Dissolve the Chloride in the Distilled Water, and filter through paper.

LIQUOR CALCII CHLORIDI.

SOLUTION OF CHLORIDE OF CALCIUM.

Take of Marble, in small pieces, six troyounces;
Muriatic Acid twelve troyounces;
Distilled Water a sufficient quantity.

Mix the Acid with half a pint of Distilled Water, and gradually add the Marble. Towards the close of the effervescence apply a gentle heat, and, when the action has ceased, pour off the clear liquid, and evaporate to dryness. Dissolve the residue in one and a half times its weight of Distilled Water, and filter through paper.

LIQUOR CALCIS.

SOLUTION OF LIME.

LIME-WATER.

Take of Lime four troyounces;
Distilled Water eight pints.

Upon the Lime, first slaked with a little of the Distilled Water, pour the remainder of the Water, and stir them together. Then immediately cover the vessel, and set it aside for three hours. Keep the solution, together with the undissolved Lime, in a well-stopped bottle, and pour off the clear liquid when wanted.

Water free from saline or other obvious impurity, though not distilled, may be employed in this process.

Solution of Lime becomes turbid when heated, and clear again on cooling. Its alkaline reaction disappears entirely, when an excess of carbonic acid has been passed through it, and the excess has been expelled by boiling.

LIQUOR FERRI CHLORIDI.

SOLUTION OF CHLORIDE OF IRON.

Take of Iron, in the form of wire, and cut in small pieces, three troyounces;
Muriatic Acid seventeen troyounces and a half;
Nitric Acid,
Distilled Water, each, a sufficient quantity.

Put the Iron into a flask measuring two pints, pour upon it eleven troyounces of the Muriatic Acid, and let the mixture stand until effervescence ceases; then heat to the boiling point, decant the liquid, filter through paper, and, having rinsed the flask with a little Distilled Water, boiling hot, pour the washings upon the filter. Put the filtered liquid into a porcelain capsule measuring four pints, mix with it the residuary Muriatic Acid, and, having heated the mixture nearly to the boiling point, add a troyounce and a half of Nitric Acid. Upon the cessation of effervescence, drop in Nitric Acid until it no longer occasions effervescence; and, when the liquid becomes cool, add enough Distilled Water to make it measure a pint.

A reddish-brown liquid, having an acid and strongly styptic taste, and the specific gravity 1.355. When diluted with water it affords no precipitate with chloride of barium or ferrocyanide of potassium. When a crystal of sulphate of iron is added to a little of the solution, and afterwards a few drops of sulphuric acid, a black colour is not produced near the crystal. Two fluidrachms of the solution, diluted with water, and treated with ammonia in excess, yield a precipitate of sesquioxide of iron, which, when washed, dried, and ignited, weighs 28.25 grains.

LIQUOR FERRI CITRATIS.

SOLUTION OF CITRATE OF IRON.

Take of Citric Acid, in coarse powder, five troyounces and three hundred and sixty grains;
Solution of Tersulphate of Iron a pint;
Water of Ammonia twenty fluidounces;
Distilled Water a sufficient quantity.

To the Water of Ammonia, mixed with two pints of Distilled Water, add the Solution of Tersulphate of Iron, previously mixed with two pints of Distilled Water, stirring constantly; transfer the precipitate formed to a muslin strainer, and wash it with water until the washings are nearly tasteless. After the precipitate has been drained, put half of it into a porcelain capsule, on a water-bath heated to 140°, add the Citric Acid, and stir the mixture until the precipitate is nearly dissolved. Then add so much of the reserved precipitate as may be necessary to fully saturate the Acid. Lastly, filter the liquid, and evaporate it, at a temperature not above 140°, until it is reduced to the measure of a pint.

LIQUOR FERRI NITRATIS.

SOLUTION OF NITRATE OF IRON.

Take of Iron, in the form of wire, and cut in pieces, two troyounces and a half;
Nitric Acid five troyounces;
Distilled Water a sufficient quantity.

Mix the Iron with twelve fluidounces of Distilled Water, in a wide-mouthed bottle, and add to the mixture, in small portions at a time, with frequent agitation, three troy-

ounces of the Nitric Acid, previously mixed with six fluidounces of Distilled Water, moderating the reaction by setting the vessel in cold water, in order to prevent the occurrence of red fumes. When the effervescence has nearly ceased, agitate the solution with the undissolved Iron until a portion of the liquid, on being filtered, exhibits a pale-green colour. Then filter the liquid, and, having poured it into a capacious porcelain capsule, heat it to the temperature of 130°, and add the remainder of the Nitric Acid. When the effervescence has ceased, continue the heat until no more gas escapes, and then add enough Distilled Water to make the liquid measure thirty-six fluidounces.

A transparent liquid, having a pale-amber colour, and a specific gravity between 1.060 and 1.070. It does not afford a blue precipitate with ferridcyanide of iron. A fluidounce of it, on the addition of ammonia in excess, yields a reddish-brown precipitate, which, after it has been washed, dried, and ignited, weighs between eight and ten grains.

LIQUOR FERRI SUBSULPHATIS.

SOLUTION OF SUBSULPHATE OF IRON.

SOLUTION OF PERSULPHATE OF IRON.—MONSEL'S SOLUTION.

Take of Sulphate of Iron, in coarse powder, twelve troyounces;

Sulphuric Acid a troyounce and thirty grains;

Nitric Acid a troyounce and three hundred grains;

Distilled Water a sufficient quantity.

Mix the Acids with half a pint of Distilled Water in a

capacious porcelain capsule, and, having heated the mixture to the boiling point, add the Sulphate of Iron, one-fourth at a time, stirring after each addition until effervescence ceases. Then keep the solution in brisk ebullition until nitrous vapours are no longer perceptible, and the colour assumes a deep ruby-red tint. Lastly, when the liquid is nearly cold, add enough Distilled Water to make it measure twelve fluidounces.

An inodorous, syrupy liquid, of a ruby-red colour, and of an extremely astringent taste, without causticity. Its specific gravity is 1.552. It mixes with water and with alcohol in all proportions without decomposition, and yields, with ammonia, a bulky, reddish-brown precipitate. By evaporating a portion of it on a glass surface, with a moderate heat, the salt may be obtained in transparent scales, which are deliquescent, and readily soluble in water.

LIQUOR FERRI TERSULPHATIS.

SOLUTION OF TERSULPHATE OF IRON.

Take of Sulphate of Iron, in coarse powder, twelve troyounces;
Sulphuric Acid two troyounces and sixty grains;
Nitric Acid a troyounce and three hundred and sixty grains;
Water a sufficient quantity.

Mix the Acids with half a pint of Water, in a capacious porcelain capsule, and, having heated the mixture to the boiling point, add the Sulphate of Iron, one-fourth at a time, stirring after each addition until effervescence ceases. Then continue the heat until the solution acquires a reddish-brown colour, and is free from nitrous odour. Lastly,

when the liquid is nearly cold, add enough Water to make it measure a pint and a half.

A dark, reddish-brown liquid, nearly devoid of odour, and of an acid and extremely styptic taste. Its specific gravity is 1.320. It mixes with water and with alcohol in all proportions without decomposition. A fluidounce of it yields, on the addition of ammonia in excess, a bulky, reddish-brown precipitate, which is free from black discolouration, and which, after it has been washed, dried, and ignited, weighs sixty-nine grains.

LIQUOR GUTTA-PERCHÆ.

SOLUTION OF GUTTA-PERCHA.

Take of Gutta-percha, in thin slices, a troyounce and a half;

Purified Chloroform seventeen troyounces;

Carbonate of Lead, in fine powder, two troyounces.

To twelve troyounces of the Chloroform, contained in a bottle, add the Gutta-percha, and shake occasionally until it is dissolved. Then add the Carbonate of Lead, previously mixed with the remainder of the Chloroform, and, having several times shaken the whole together, at intervals of half an hour, set the mixture aside, and let it stand for ten days, or until the insoluble matter has subsided, and the solution become limpid, and either colourless or of a pale straw-colour. Lastly, decant the liquid, and keep it in a well-stopped bottle.

LIQUOR HYDRARGYRI NITRATIS.

SOLUTION OF NITRATE OF MERCURY.

Take of Mercury three troyounces;
Nitric Acid five troyounces;
Distilled Water six fluidrachms.

Dissolve the Mercury, with the aid of a gentle heat, in the Acid previously mixed with the Distilled Water. When reddish vapours cease to arise, evaporate the liquid to seven troyounces and a half, and keep it in a well-stopped bottle.

Solution of Nitrate of Mercury may also be prepared as follows:

Take of Red Oxide of Mercury three troyounces and one hundred and twenty grains;
Nitric Acid three troyounces and three hundred grains;
Distilled Water six fluidrachms.

Mix the Acid with the Water, dissolve the Oxide of Mercury in the mixture, and evaporate to seven troyounces and a half.

A transparent, nearly colourless, acid liquid, having the specific gravity 2.165. It is not precipitated by the addition of distilled water; and the diluted solution affords, with potassa, a dirty-yellow precipitate, and with iodide of potassium, a bright-red one, soluble in an excess of the precipitant. When dropped on a bright surface of copper, the diluted solution instantly deposits a coating of mercury.

LIQUOR IODINII COMPOSITUS.

COMPOUND SOLUTION OF IODINE.

Take of Iodine three hundred and sixty grains;
Iodide of Potassium a troyounce and a half;
Distilled Water a pint.

Dissolve the Iodine and Iodide of Potassium in the Distilled Water.

LIQUOR MAGNESII CITRATIS.

SOLUTION OF CITRATE OF MAGNESIUM.

Take of Carbonate of Magnesium two hundred grains;
Citric Acid four hundred grains;
Syrup of Citric Acid two fluidounces;
Bicarbonate of Potassium forty grains;
Water a sufficient quantity.

Dissolve the Citric Acid in four fluidounces of Water, and, having added the Carbonate of Magnesium, stir until it is dissolved. Filter the solution into a strong twelve-ounce bottle, containing the Syrup of Citric Acid. Then add the Bicarbonate of Potassium, and enough Water to nearly fill the bottle, which must be closed with a cork, secured with twine. Lastly, shake the mixture occasionally until the Bicarbonate is dissolved.

LIQUOR MORPHIÆ SULPHATIS.

SOLUTION OF SULPHATE OF MORPHIA.

Take of Sulphate of Morphia eight grains;
Distilled Water half a pint.

Dissolve the Sulphate of Morphia in the Distilled Water.

LIQUOR PLUMBI SUBACETATIS.

SOLUTION OF SUBACETATE OF LEAD.

Take of Acetate of Lead sixteen troyounces;
Oxide of Lead, in fine powder, nine troyounces and a half;
Boiling Water a sufficient quantity.

Put the Acetate and Oxide into four pints of Boiling Water, in a glass or porcelain vessel, and boil for half an hour, occasionally adding Boiling Water to preserve the measure; then filter through paper. Lastly, keep the liquid in a well-stopped bottle.

A colourless liquid, of the specific gravity 1.267. It is decomposed by exposure to the air, carbonate of lead being formed. When added to a solution of gum, it occasions a dense white precipitate. In other respects it possesses the properties of an aqueous solution of acetate of lead. (See *Plumbi Acetas.*)

LIQUOR PLUMBI SUBACETATIS DILUTUS.

DILUTED SOLUTION OF SUBACETATE OF LEAD.

LEAD-WATER.

Take of Solution of Subacetate of Lead three fluidrachms;
Distilled Water a pint.

Mix them.

LIQUOR POTASSÆ.

SOLUTION OF POTASSA.

Take of Bicarbonate of Potassium fifteen troyounces;
Lime nine troyounces;
Distilled Water a sufficient quantity.

Dissolve the Bicarbonate of Potassium in four pints of Distilled Water, and heat the solution until effervescence ceases. Then add Distilled Water to make up the loss by evaporation, and heat the solution to the boiling point. Mix the Lime with four pints of Distilled Water, and, having heated the mixture to the boiling point, add it to the alkaline solution, and boil for ten minutes. Then transfer the whole to a muslin strainer, and, when the liquid portion has passed, add enough Distilled Water, through the strainer, to make the strained liquid measure seven pints. Lastly, keep the liquid in well-stopped bottles of green glass.

Solution of Potassa, thus prepared, has the specific gravity 1.065, and contains five and eight-tenths per cent. of hydrate of potassa.

Solution of Potassa may also be prepared in the following manner.

Take of Potassa a troyounce;

Distilled Water a pint.

Dissolve the Potassa in the Distilled Water, and allow the solution to stand until the sediment subsides. Then pour off the clear liquid, and keep it in a well-stopped bottle of green glass.

A colourless liquid, having an extremely acrid taste, and a strong alkaline reaction. It causes no effervescence when added to a dilute acid, and yields a yellow precipitate with bichloride of platinum. When neutralized with dilute nitric acid, it gives no precipitate, or only a slight one, with carbonate of sodium, chloride of barium, or nitrate of silver.

LIQUOR POTASSII ARSENITIS.

SOLUTION OF ARSENITE OF POTASSIUM.

Take of Arsenious Acid, in small pieces,
Bicarbonate of Potassium, each, sixty-four grains;
Compound Spirit of Lavender half a fluidounce;
Distilled Water a sufficient quantity.

Boil the Arsenious Acid and Bicarbonate of Potassium, in a glass vessel, with half a fluidounce of Distilled Water, until the Acid is entirely dissolved, and add twelve fluidounces of Distilled Water. Then add the Compound Spirit of Lavender, and afterwards enough Distilled Water to make it measure a pint.

LIQUOR POTASSII CITRATIS.

SOLUTION OF CITRATE OF POTASSIUM.

Take of Citric Acid half a troyounce;
Bicarbonate of Potassium three hundred and thirty grains;
Water half a pint.

Dissolve the Acid and the Bicarbonate in the Water, and strain the solution through muslin.

LIQUOR POTASSII PERMANGANATIS.

SOLUTION OF PERMANGANATE OF POTASSIUM.

Take of Permanganate of Potassium sixty-four grains;
Distilled Water a pint.

Dissolve the Permanganate of Potassium in the Distilled Water.

LIQUOR SODÆ.

SOLUTION OF SODA.

Take of Carbonate of Sodium twenty-six troyounces;
Lime eight troyounces;
Distilled Water a sufficient quantity.

Dissolve the Carbonate of Sodium in three pints and a half of Distilled Water, and heat the solution to the boiling point. Mix the Lime with three pints of Distilled Water, and, having heated the mixture to the boiling point, add it to the hot solution of the Carbonate, and boil for ten minutes. Then transfer the whole to a muslin strainer, and, when the liquid portion has passed, add enough Distilled Water, through the strainer, to make the strained liquid measure six pints. Lastly, keep the liquid in well-stopped bottles of green glass.

Solution of Soda has the specific gravity 1.071, and contains five and seven-tenths per cent. of hydrate of soda.

A colourless liquid, having an extremely acrid taste, and a strong alkaline reaction. It causes no effervescence when added to a dilute acid, and yields no precipitate with bichloride of platinum. When neutralized with dilute nitric acid, it gives no precipitate, or only a slight one, with carbonate of sodium, chloride of barium, or nitrate of silver.

LIQUOR SODÆ CHLORINATÆ.

SOLUTION OF CHLORINATED SODA.

Take of Chlorinated Lime twelve troyounces;
Carbonate of Sodium twenty-four troyounces;
Water twelve pints.

Dissolve the Carbonate of Sodium in three pints of the

Water, with the aid of heat. Triturate the Chlorinated Lime, a little at a time, with small portions of the Water, gradually added, until a smooth, uniform mixture is obtained. Mix this intimately with the remainder of the Water, and set the mixture aside for twenty-four hours. Then decant the clear liquid, and, having transferred the residue to a muslin strainer, allow it to drain until enough liquid has passed to make, with the decanted liquid, eight pints. Mix this thoroughly with the solution of Carbonate of Sodium, transfer the mixture to a muslin strainer, and allow it to drain; adding water, if necessary, towards the close, until eleven pints and a half of liquid have passed. Lastly, keep the liquid in well-stopped bottles, protected from the light.

A transparent liquid, of a greenish-yellow colour, having a slight odour of chlorine, and a sharp, saline taste. Its specific gravity is 1.045. It rapidly decolourizes solution of indigo, and produces a copious. light-brown precipitate with solution of sulphate of iron.

LIQUOR SODII ARSENIATIS.

SOLUTION OF ARSENIATE OF SODIUM.

Take of Arseniate of Sodium, rendered anhydrous by a heat not exceeding 300°, sixty-four grains;
Distilled Water a pint.

Dissolve the Arseniate of Sodium in the Water.

LIQUOR ZINCI CHLORIDI.

SOLUTION OF CHLORIDE OF ZINC.

Take of Zinc, in small pieces, six troyounces;
Nitric Acid,
Precipitated Carbonate of Zinc, each, one hundred and fifty grains;
Muriatic Acid,
Distilled Water, each, a sufficient quantity.

To the Zinc, contained in a glass or porcelain vessel, add gradually enough Muriatic Acid to dissolve it; then strain the solution, add the Nitric Acid, and evaporate to dryness. Dissolve the dry mass in five fluidounces of Distilled Water, add the Precipitated Carbonate of Zinc, and agitate the mixture occasionally during twenty-four hours; then filter through paper, adding enough Distilled Water, through the filter, to make the liquid measure a pint.

LITHIUM.

LITHII CITRAS.

CITRATE OF LITHIUM.

Take of Carbonate of Lithium one hundred grains;
Citric Acid, in crystals, two hundred grains;
Distilled Water two fluidounces.

Dissolve the Citric Acid in the water gently heated, and to the solution, gradually add the Carbonate of Lithium until perfectly dissolved, heating the solution so long as effervescence is produced. Evaporate, by means of a steam

or sand-bath, to a viscid consistence, dry the residue in an oven, at a temperature of about 240°, then rapidly pulverize it, and preserve the powder in a well-stopped bottle.

A white powder, deliquescent, and soluble in twenty-five parts of water. Upon ignition it leaves a residue, which, if neutralized by muriatic acid, and dissolved in alcohol, yields a solution which burns with a crimson flame, showing the presence of lithium. Citric acid is indicated by the solution becoming turbid when heated with lime-water, and clear again on cooling. Twenty grains of the salt, burned at a low red heat, with free access of air, should leave ten grains and six-tenths of white residue.

MAGNESIUM.

MAGNESIA.

MAGNESIA.

Take of Carbonate of Magnesium a convenient quantity.

Put it into an earthen vessel, and expose it to a red heat for two hours, or until the carbonic acid is entirely expelled, rubbing it constantly with an iron spoon during calcination.

Magnesia is wholly dissolved, without effervescence, by dilute muriatic acid; and the solution yields no precipitate with oxalate of ammonium or chloride of barium.

MELLITA.

MEL DESPUMATUM.

CLARIFIED HONEY.

Take of Honey a convenient quantity.

Melt it by means of a water-bath, and then remove the scum.

MEL ROSÆ.

HONEY OF ROSE.

Take of Red Rose, in moderately fine powder, two troyounces;
Clarified Honey twenty-five troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with half a fluidounce of Diluted Alcohol, pack it firmly in a conical glass percolator, and gradually pour Diluted Alcohol upon it until six fluidrachms of filtered liquid have passed. Set this aside, and continue the percolation until half a pint more of liquid is obtained. Evaporate this, by means of a water-bath, to ten fluidrachms, add the reserved liquid, and mix the whole with the Clarified Honey.

MEL SODII BORATIS.

HONEY OF BORATE OF SODIUM.

Take of Borate of Sodium, in fine powder, sixty grains;
Clarified Honey a troyounce.

Mix them.

MISTURÆ.

MISTURA AMMONIACI.

AMMONIAC MIXTURE.

Take of Ammoniac one hundred and twenty grains;
Water half a pint.

Add the Water gradually to the Ammoniac, rubbing them together until they are thoroughly mixed, and strain.

MISTURA AMYGDALÆ.

ALMOND MIXTURE.

Take of Sweet Almond half a troyounce;
Gum Arabic, in fine powder, thirty grains;
Sugar one hundred and twenty grains;
Distilled Water eight fluidounces.

Having blanched the Almond, add the Gum Arabic and Sugar, and beat them in a mortar, until they are thoroughly mixed; then rub the mixture with the Distilled Water gradually added, and strain.

MISTURA ASSAFŒTIDÆ.

ASSAFETIDA MIXTURE.

Take of Assafetida one hundred and twenty grains;
Water half a pint.

Add the Water gradually to the Assafetida, and rub them together until they are thoroughly mixed.

MISTURA CHLOROFORMI.

CHLOROFORM MIXTURE.

Take of Purified Chloroform half a troyounce;
Camphor sixty grains;
The yolk of one Egg;
Water six fluidounces.

Rub the yolk in a mortar, first by itself, then with the Camphor previously dissolved in the Chloroform, and, lastly, with the Water gradually added, so as to make a uniform mixture.

MISTURA CRETÆ.

CHALK MIXTURE.

Take of Prepared Chalk half a troyounce;
Glycerin half a fluidounce;
Gum Arabic, in fine powder, one hundred and twenty grains;
Cinnamon Water,
Water, each, four fluidounces.

Rub the Chalk and Gum Arabic with the Water gradually added; then add the other ingredients, and mix the whole together.

MISTURA FERRI COMPOSITA.

COMPOUND MIXTURE OF IRON.

Take of Myrrh,
Sugar, each, sixty grains;
Carbonate of Potassium twenty-five grains;
Sulphate of Iron, in coarse powder, twenty grains;

Spirit of Lavender half a fluidounce;
Rose Water seven fluidounces and a half.

Rub the Myrrh, Sugar, and Carbonate of Potassium, with the Rose Water gradually added; then with the Spirit of Lavender, and, lastly, with the Sulphate of Iron; and pour the mixture immediately into a bottle, which must be well stopped.

MISTURA GLYCYRRHIZÆ COMPOSITA.

COMPOUND MIXTURE OF LIQUORICE.

BROWN MIXTURE.

Take of Liquorice, in fine powder,
Sugar, in coarse powder,
Gum Arabic, in fine powder, each, half a troy-ounce;
Camphorated Tincture of Opium two fluidounces;
Wine of Antimony a fluidounce;
Spirit of Nitrous Ether half a fluidounce;
Water twelve fluidounces.

Rub the Liquorice, Sugar, and Gum Arabic with the Water gradually added; then add the other ingredients, and mix the whole together.

MISTURA POTASSII CITRATIS.

MIXTURE OF CITRATE OF POTASSIUM.

NEUTRAL MIXTURE.

Take of Lemon Juice, fresh, half a pint;
Bicarbonate of Potassium a sufficient quantity.

Add the Bicarbonate of Potassium gradually to the Lemon Juice until the acid is completely neutralized; then strain through muslin.

MORPHIA.

MORPHIA.

MORPHIA.

Take of Opium, sliced, twelve troyounces;
Water of Ammonia six fluidounces;
Animal Charcoal, in fine powder,
Alcohol,
Distilled Water, each, a sufficient quantity.

Macerate the Opium with four pints of Distilled Water for twenty-four hours, and, having worked it with the hands, again macerate for twenty-four hours, and strain. In like manner, macerate the residue twice successively, with the same quantity of Distilled Water, and strain. Mix the infusions, evaporate to six pints, and filter; then add five pints of Alcohol, and afterwards three fluidounces of the Water of Ammonia, previously mixed with half a pint of Alcohol. After twenty-four hours, pour in the remainder of the Water of Ammonia, mixed, as before, with half a pint of Alcohol, and set the liquid aside for twenty-four hours that crystals may form. To purify these, boil them with two pints of Alcohol until they are dissolved, filter the solution, while hot, through Animal Charcoal, and set it aside to crystallize.

Morphia, thus prepared, is in colourless crystals, which are inflammable, and wholly dissipated by red heat. It is scarcely soluble in cold water, slightly so in boiling water, and freely soluble in boiling alcohol. Nitric acid first reddens it, and then renders it yellow. With solution of sesquichloride of iron it assumes a deep-blue colour. Its solution restores the colour of litmus, previously reddened by an acid.

MORPHIÆ ACETAS.

ACETATE OF MORPHIA.

Take of Morphia, in fine powder, a troyounce;
Distilled Water half a pint;
Acetic Acid a sufficient quantity.

Mix the Morphia with the Distilled Water; then carefully drop Acetic Acid into the mixture, stirring it constantly, until the Morphia is neutralized and dissolved. Evaporate the solution, by means of a water-bath, to the consistence of syrup, and set it aside until it concretes. Lastly, dry the salt with a gentle heat, and rub it into powder.

A white powder, wholly soluble in water and in alcohol. From its solution, potassa throws down a precipitate, which is dissolved by an excess of the alkali. It is affected by heat, nitric acid, and sesquichloride of iron in the same manner as Morphia. When sulphuric acid is added to the salt, acetous vapours are evolved.

MORPHIÆ MURIAS.

MURIATE OF MORPHIA.

Take of Morphia, in fine powder, a troyounce;
Distilled Water four fluidounces;
Muriatic Acid a sufficient quantity.

Mix the Morphia with the Distilled Water; then carefully drop Muriatic Acid into the mixture, stirring it constantly, until the Morphia is neutralized and dissolved. Evaporate the solution, by means of a water-bath, so that on cooling it may crystallize. Lastly, drain the crystals, and dry them on bibulous paper.

In snow-white, feathery crystals, wholly soluble in water and in alcohol. Potassa, added to the solution, throws down a precipitate which is dissolved by an excess of the alkali. With nitrate of silver it yields a precipitate, insoluble in nitric or muriatic acid, but soluble in an excess of ammonia. It is affected by heat, nitric acid, and sesquichloride of iron in the same manner as Morphia.

MORPHIÆ SULPHAS.

SULPHATE OF MORPHIA.

Take of Morphia, in fine powder, a troyounce;
Distilled Water half a pint;
Diluted Sulphuric Acid a sufficient quantity.

Mix the Morphia with the Distilled Water; then carefully drop Diluted Sulphuric Acid into the mixture, stirring it constantly, until the Morphia is neutralized and dissolved. Evaporate the solution, by means of a water-bath, so that on cooling it may crystallize. Lastly, drain the crystals, and dry them on bibulous paper.

In snow-white feathery crystals, which are wholly soluble in water. Potassa, added to the solution, throws down a precipitate, which is dissolved by an excess of the alkali. With chloride of barium it yields a white precipitate insoluble in nitric acid. It is affected by heat, nitric acid, and sesquichloride of iron in the same manner as Morphia.

MUCILAGINES.

MUCILAGO ACACIÆ.

MUCILAGE OF GUM ARABIC.

Take of Gum Arabic, in small fragments, four troyounces;
Water half a pint.

Add the Gum Arabic to the Water, agitate occasionally until it is dissolved, and strain.

MUCILAGO SASSAFRAS MEDULLÆ.

MUCILAGE OF SASSAFRAS PITH.

Take of Sassafras Pith one hundred and twenty grains;
Water a pint.

Macerate for three hours, and strain.

MUCILAGO TRAGACANTHÆ.

MUCILAGE OF TRAGACANTH.

Take of Tragacanth a troyounce;
Boiling Water a pint.

Macerate the Tragacanth with the Water for twenty-four hours, occasionally stirring; then beat the mixture so as to render it of uniform consistence, and strain forcibly through muslin.

MUCILAGO ULMI.

MUCILAGE OF SLIPPERY-ELM BARK.

Take of Slippery-elm Bark, sliced and bruised, a troy-ounce;

Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

OLEA DESTILLATA.

The Distilled Oils, when dropped on paper, produce a greasy stain, which entirely disappears on exposure to a moderate heat. When shaken with water in a graduated tube and allowed to separate, they are not diminished in volume. Dry acetate of potassium, or solid chloride of calcium, is not liquefied on being agitated with them.

Most of the Distilled Oils are prepared by the following general formula.

Put the substance from which the Oil is to be extracted into a retort, or other vessel suitable for distillation, and add enough water to cover it; then distil by a regulated heat into a large refrigeratory. Separate the Distilled Oil from the water which comes over with it.

OLEUM ANISI.

OIL OF ANISE.

Prepare this Oil from Anise, bruised, by the general formula given above.

OLEUM CARI.

OIL OF CARAWAY.

Prepare this Oil from Caraway, bruised, by the general formula given at page 233.

OLEUM CARYOPHYLLI.

OIL OF CLOVES.

Prepare this Oil from Cloves, bruised, by the general formula given at page 233.

OLEUM CHENOPODII.

OIL OF WORMSEED.

Prepare this Oil from Wormseed, by the general formula given at page 233.

OLEUM COPAIBÆ.

OIL OF COPAIBA.

Take of Copaiba twelve troyounces;

Water sixteen pints.

Add the Copaiba to the Water in a tinned still, and, having adapted a proper refrigeratory, distil twelve pints. Separate the Oil which comes over, from the water, return this to the still, and again distil twelve pints. Lastly, separate the Oil procured in the second distillation, add it to that first obtained, and keep the whole in a well-stopped bottle.

OLEUM CUBEBÆ.

OIL OF CUBEB.

Prepare this Oil from Cubeb, bruised, by the general formula given at page 233.

OLEUM ERIGERONTIS CANADENSIS.

OIL OF CANADA ERIGERON.

Prepare this Oil from Canada Erigeron, by the general formula given at page 233.

OLEUM FŒNICULI.

OIL OF FENNEL.

Prepare this Oil from Fennel, bruised, by the general formula given at page 233.

OLEUM GAULTHERIÆ.

OIL OF GAULTHERIA.

Prepare this Oil from fresh Gaultheria, by the general formula given at page 233.

OLEUM HEDEOMÆ.

OIL OF HEDEOMA.

Prepare this Oil from Hedeoma, by the general formula given at page 233.

OLEUM JUNIPERI.

OIL OF JUNIPER.

Prepare this Oil from Juniper, bruised, by the general formula given at page 233.

OLEUM LAVANDULÆ.

OIL OF LAVENDER.

Prepare this Oil from Lavender, by the general formula given at page 233.

OLEUM MENTHÆ PIPERITÆ.

OIL OF PEPPERMINT.

Prepare this Oil from fresh Peppermint, by the general formula given at page 233.

OLEUM MENTHÆ VIRIDIS.

OIL OF SPEARMINT.

Prepare this Oil from fresh Spearmint, by the general formula given at page 233.

OLEUM MONARDÆ.

OIL OF HORSEMINT.

Prepare this Oil from fresh Horsemint, by the general formula given at page 233.

OLEUM ORIGANI.

OIL OF ORIGANUM.

Prepare this Oil from fresh Origanum, by the general formula given at page 233.

OLEUM PIMENTÆ.

OIL OF PIMENTO.

Prepare this Oil from Pimento, bruised, by the general formula given at page 233.

OLEUM ROSMARINI.

OIL OF ROSEMARY.

Prepare this Oil from fresh Rosemary, by the general formula given at page 233.

OLEUM RUTÆ.

OIL OF RUE.

Prepare this Oil from fresh Rue, by the general formula given at page 233.

OLEUM SABINÆ.

OIL OF SAVINE.

Prepare this Oil from Savine, bruised, by the general formula given at page 233.

OLEUM SASSAFRAS.

OIL OF SASSAFRAS.

Prepare this Oil from Sassafras, bruised, by the general formula given at page 233.

OLEUM SUCCINI RECTIFICATUM.

RECTIFIED OIL OF AMBER.

Take of Oil of Amber a pint;

Water six pints.

Mix them in a glass retort, and distil until four pints of water have passed with the Oil into the receiver; then separate the Oil from the water, and keep it in a well-stopped bottle.

OLEUM TABACI.

OIL OF TOBACCO.

Take of Tobacco, in coarse powder, twelve troyounces.

Put it into a retort of green glass, connected with a re-

frigerated receiver, to which a tube is attached for the escape of the incondensible products. Then, by means of a sand-bath, heat the retort gradually to dull redness, and maintain it at that temperature until empyreumatic oil ceases to come over. Lastly, separate the dark oily liquid in the receiver, from the watery portion, and keep it in a well-stopped bottle.

OLEUM VALERIANÆ.

OIL OF VALERIAN.

Prepare this Oil from Valerian, bruised, by the general formula given at page 233.

OLEORESINÆ.

OLEORESINA CAPSICI.

OLEORESIN OF CAPSICUM.

373.25 grammes.

Take of Capsicum, in fine powder, twelve troyounces;
Ether a sufficient quantity.

709.8 c.c.

Put the Capsicum into a cylindrical percolator, provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids, press it firmly, and gradually pour Ether upon it, until twenty-four fluidounces of liquid have slowly passed. Recover the greater part of the ether by distillation on a water-bath, and expose the residue, in a capsule, until the remaining ether has evaporated. Lastly, remove, by straining, the fatty matter which separates on standing, and keep the Oleoresin in a well-stopped bottle.

373 : 709 = 500 : 950

OLEORESINA CUBEBÆ.

OLEORESIN OF CUBEB.

Take of Cubeb, in fine powder, twelve troyounces;
Ether a sufficient quantity.

Put the Cubeb into a cylindrical percolator, provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids, press it moderately, and gradually pour Ether upon it, until twenty-four fluidounces of liquid have slowly passed. Recover the greater part of the Ether by distillation on a water-bath, and expose the residue, in a capsule, until the remaining ether has evaporated. When, after standing in a close vessel, the liquid has deposited a waxy and crystalline matter, decant the Oleoresin and keep it in a well-stopped bottle.

OLEORESINA FILICIS.

OLEORESIN OF FERN.

Take of Male Fern, in fine powder, twelve troyounces;
Ether a sufficient quantity.

Put the Male Fern into a cylindrical glass percolator, provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids, press it firmly, and gradually pour Ether upon it, until twenty-four fluidounces of liquid have slowly passed. Recover the greater part of the Ether by distillation on a water-bath, and expose the residue, in a capsule, until the remaining Ether has evaporated. Lastly, keep the Oleoresin in a well-stopped bottle.

OLEORESINA LUPULINÆ.

OLEORESIN OF LUPULIN.

Take of Lupulin twelve troyounces;

Ether a sufficient quantity.

Put the Lupulin into a narrow cylindrical percolator, provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids, press it firmly, and gradually pour Ether upon it, until twenty fluidounces of liquid have slowly passed. Recover the greater part of the Ether by distillation on a water-bath, and expose the residue, in a capsule, until the remaining ether has evaporated. Lastly, keep the Oleoresin in a wide-mouthed bottle, well stopped.

OLEORESINA PIPERIS.

OLEORESIN OF BLACK PEPPER.

Take of Black Pepper, in fine powder, twelve troyounces;

Ether a sufficient quantity.

Put the Black Pepper into a cylindrical percolator provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids, press it firmly, and gradually pour Ether upon it, until twenty fluidounces of liquid have slowly passed. Recover the greater part of the ether by distillation on a water-bath, and expose the residue, in a capsule, until the remaining ether has evaporated, and the deposition of piperin in crystals has ceased. Lastly, separate the Oleoresin from the piperin

by expression through a muslin strainer, and keep it in a well-stopped bottle.

OLEORESINA ZINGIBERIS.

OLEORESIN OF GINGER.

Take of Ginger, in fine powder, twelve troyounces;
Stronger Ether twelve fluidounces;
Alcohol a sufficient quantity.

Put the Ginger into a cylindrical percolator, provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids, press it firmly, and pour upon it the Stronger Ether. When this has been absorbed by the powder, add Alcohol until twelve fluidounces of liquid have slowly passed. Recover from this the greater part of the ether by distillation on a water-bath, and expose the residue, in a capsule, until the volatile part has evaporated. Lastly, keep the Oleoresin in a well-stopped bottle.

PILULÆ.

The practice of sugar-coating pills is approved in reference to pills which are expected to be slow in their operation, but is of doubtful propriety in regard to those intended to act quickly, as the coating retards the solution of the pill-matter in the liquids of the stomach.

PILULÆ ALOES.

PILLS OF ALOES.

Take of Socotrine Aloes, in fine powder,

Soap, in fine powder, each, forty-eight grains.

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ ALOES ET ASSAFŒTIDÆ.

PILLS OF ALOES AND ASSAFETIDA.

Take of Socotrine Aloes, in fine powder,

Assafetida,

Soap, in fine powder, each, thirty-two grains.

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ ALOES ET MASTICHES.

PILLS OF ALOES AND MASTIC.

Take of Socotrine Aloes, in fine powder, forty-eight grains;

Mastic, in fine powder,

Red Rose, in fine powder, each, twelve grains.

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ ALOES ET MYRRHÆ.

PILLS OF ALOES AND MYRRH.

Take of Purified Aloes, in fine powder, forty-eight grains;
Myrrh, in fine powder, twenty-four grains;
Aromatic powder twelve grains;
Syrup a sufficient quantity.

Beat the whole together so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ ANTIMONII COMPOSITÆ.

COMPOUND PILLS OF ANTIMONY.

PLUMMER'S PILLS.

Take of Sulphurated Antimony,
Mild Chloride of Mercury, each, twelve grains;
Guaiac, in fine powder,
Molasses, each, twenty-four grains.

Rub the Sulphurated Antimony first with the Mild Chloride of Mercury, and then with the Guaiac and Molasses, so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ ASSAFŒTIDÆ.

PILLS OF ASSAFETIDA.

Take of Assafetida seventy-two grains;
Soap, in fine powder, twenty-four grains;

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ CATHARTICÆ COMPOSITÆ.

COMPOUND CATHARTIC PILLS.

Take of Compound Extract of Colocynth thirty-two grains;
Extract of Jalap, in fine powder,
Mild Chloride of Mercury, each, twenty-four grains;
Gamboge, in fine powder, six grains.

Mix the powders together; then with water form a pilular mass, and divide into twenty-four pills.

PILULÆ COPAIBÆ.

PILLS OF COPAIBA.

Take of Copaiba two troyounces;
Magnesia, recently prepared, sixty grains.

Mix them together, and set the mixture aside until it concretes into a pilular mass; then divide into two hundred pills.

Should the mixture not concrete in eight or ten hours, a deficiency of water in the Copaiba may be inferred; and this difficulty may be obviated, in subsequent operations, by shaking the Copaiba with one-twentieth of its weight of water, allowing it to stand for some days, or until all the uncombined water has subsided, and then decanting and keeping it in closed bottles for use.

PILULÆ FERRI COMPOSITÆ.

COMPOUND PILLS OF IRON.

Take of Myrrh, in fine powder, thirty-six grains;
Carbonate of Sodium,
Sulphate of Iron, each, eighteen grains;
Syrup a sufficient quantity.

Rub the Myrrh, first with the Carbonate of Sodium, and afterwards with the Sulphate of Iron, until they are thoroughly mixed; then beat them with Syrup so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ FERRI IODIDI

PILLS OF IODIDE OF IRON.

Take of Iodine three hundred grains;
Iron, in the form of wire and cut in pieces, one hundred and twenty grains;
Sugar, in fine powder,
Liquorice Root, in fine powder, each, one hundred and ninety-two grains;
Liquorice, in fine powder,
Gum Arabic, in fine powder, each, forty-eight grains;
Reduced Iron ninety-six grains;
Water a fluidounce and a half.

Mix the Iodine with ten fluidrachms of the Water in a glass flask, and gradually add the Iron, agitating until the solution has become of a light pea-green colour; then filter

into a porcelain capsule containing the Reduced Iron, and add the remainder of the Water in order to wash the filter. Evaporate the solution until a pellicle forms, and, adding the remaining powders previously mixed together, continue the evaporation, by means of a water-bath, with constant stirring, until the mixture is reduced to a pilular consistence; lastly, divide into three hundred and eighty-four pills.

Dissolve sixty grains of Balsam of Tolu in a fluidrachm of Ether, shake the pills with the solution until they are uniformly coated, and put them on a plate to dry, occasionally stirring them until the drying is completed. Keep the pills in a well-stopped bottle.

These pills are devoid of the smell of iodine; and distilled water, rubbed with them and filtered, does not colour solution of starch, or gives it only a slight blue tint.

PILULÆ GALBANI COMPOSITÆ.

COMPOUND PILLS OF GALBANUM.

Take of Galbanum,

Myrrh, each, thirty-six grains;

Assafetida twelve grains;

Syrup a sufficient quantity.

Beat them together so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ HYDRARGYRI.

PILLS OF MERCURY.

BLUE PILLS.

Take of Mercury three hundred and eighty-four grains;
Confection of Rose five hundred and seventy-six grains;
Liquorice Root, in fine powder, one hundred and ninety-two grains.

Rub the Mercury with the Confection until the globules cease to be visible; then add the Liquorice Root, beat the whole into a pilular mass, and divide into three hundred and eighty-four pills.

PILULÆ OPII.

PILLS OF OPIUM.

Take of Opium, in fine powder, twenty-four grains;
Soap, in fine powder, six grains.

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ QUINIÆ SULPHATIS.

PILLS OF SULPHATE OF QUINIA.

Take of Sulphate of Quinia twenty-four grains;
Clarified Honey, sufficiently inspissated, fourteen grains.

Add the Honey to the Sulphate of Quinia, beat them together so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ RHEI.

PILLS OF RHUBARB.

Take of Rhubarb, in fine powder, seventy-two grains;
Soap, in fine powder, twenty-four grains.

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ RHEI COMPOSITÆ.

COMPOUND PILLS OF RHUBARB.

Take of Rhubarb, in fine powder, forty-eight grains;
Socotrine Aloes, in fine powder, thirty-six grains;
Myrrh, in fine powder, twenty-four grains;
Oil of Peppermint three minims.

Beat them together with water so as to form a pilular mass, and divide into twenty-four pills.

PILULÆ SCILLÆ COMPOSITÆ.

COMPOUND PILLS OF SQUILL.

Take of Squill, in fine powder, twelve grains;
Ginger, in fine powder,
Ammoniac, in fine powder, each, twenty-four grains;
Soap, in fine powder, thirty-six grains;
Syrup a sufficient quantity.

Mix the powders; then beat them with Syrup so as to form a pilular mass, and divide into twenty-four pills.

PILULA FERRI CARBONATIS.

PILL OF CARBONATE OF IRON.

Take of Sulphate of Iron eight troyounces;
Carbonate of Sodium nine troyounces;
Clarified Honey three troyounces;
Sugar, in coarse powder, two troyounces;
Boiling Water two pints;
Syrup a sufficient quantity.

Dissolve the salts separately, each in a pint of the Water, and, having added two fluidounces of Syrup to the ferruginous solution, filter both solutions. Mix the two solutions, when cold, in a bottle just large enough to hold them, close it accurately with a stopper, and set it by that the carbonate of iron may subside. Pour off the supernatant liquid, and, having mixed water recently boiled, with Syrup in the proportion of a pint to the fluidounce, wash the precipitate with the mixture until the washings no longer have a saline taste. Drain the precipitate on a flannel cloth, and express as much of the water as possible. Lastly, mix the precipitate immediately with the Clarified Honey and Sugar, and, by means of a water-bath, evaporate the mixture, stirring constantly, until it is brought to the weight of eight troyounces.

PILULA SAPONIS COMPOSITA.

COMPOUND PILL OF SOAP.

Take of Opium, in fine powder, sixty grains;
Soap, in fine powder, half a troyounce.

Beat them together with water so as to form a pilular mass.

PLUMBUM.

PLUMBI IODIDUM.

IODIDE OF LEAD.

Take of Nitrate of Lead,

Iodide of Potassium, each, four troyounces;

Distilled Water a sufficient quantity.

With the aid of heat, dissolve the Nitrate of Lead in a pint and a half, and the Iodide of Potassium in half a pint of Distilled Water, and mix the solutions. Allow the precipitate formed to subside, and, having poured off the supernatant liquid, wash it with Distilled Water, and dry it with a gentle heat.

A bright-yellow, heavy, inodorous powder, fusible and volatilizable by heat, and soluble in twelve hundred and thirty-five parts of cold, and one hundred and ninety-four parts of boiling water. A hot, saturated solution, on cooling, deposits the salt in brilliant golden scales.

POTASSIUM.

POTASSA.

POTASSA.

Take of Solution of Potassa eight pints.

Evaporate the Solution rapidly in an iron vessel, over the fire, until ebullition ceases and the Potassa melts. Pour this into suitable moulds, and, when cold, keep it in a well-stopped bottle.

Potassa is very deliquescent, and dissolves in water and in alcohol, with the exception of a slight residue. Its aqueous solution has the properties mentioned under *Solution of Potassa.*

POTASSA CUM CALCE.

POTASSA WITH LIME.

Take of Potassa,

Lime, each, a troyounce.

Rub them together so as to form a powder, and keep it in a well-stopped bottle.

A grayish-white powder, answering to the tests for potassa and lime.

POTASSII ACETAS.

ACETATE OF POTASSIUM.

Take of Acetic Acid a pint;

Bicarbonate of Potassium a sufficient quantity.

Add the Bicarbonate of Potassium gradually to the Acetic Acid until it is neutralized; then filter the solution, and evaporate cautiously, by means of a sand-bath, until a dry salt remains. Lastly, keep this in a well-stopped bottle.

A white, deliquescent salt, wholly soluble in water and in alcohol. The solution does not change the colour of litmus or turmeric, and yields no precipitate with chloride of barium or ferrocyanide of potassium. If dilute, it is not precipitated by nitrate of silver; but, if concentrated, it gives with that salt a precipitate, which is redissolved by water or dilute nitric acid. Bichloride of platinum occasions a yellow precipitate, and sulphuric acid a copious disengagement of acetous vapours.

POTASSII BICARBONAS.

BICARBONATE OF POTASSIUM.

Take of Carbonate of Potassium forty-eight troyounces;

Distilled Water ten pints.

Dissolve the Carbonate of Potassium in the Distilled Water, and pass Carbonic Acid through the solution until it is fully saturated. Then filter the liquid, and evaporate that crystals may form, taking care that the heat does not exceed 160°. Lastly, pour off the supernatant liquid, and dry the crystals on bibulous paper.

Carbonic Acid may be obtained from Marble by the addition of dilute sulphuric acid.

In white crystals, permanent in the air, and wholly soluble in water. It has a slightly alkaline taste, and feebly affects the colour of turmeric. When treated with nitric acid in excess, it yields little or no precipitate with nitrate of silver. Its aqueous solution, unless heated, does not yield a precipitate with sulphate of magnesium. The crystals lose thirty and seven-tenths per cent. by exposure to a red heat. Its other properties are the same as those mentioned under *Pure Carbonate of Potassium*.

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.

Take of Bromine two troyounces;
Iron, in the form of filings, a troyounce;
Pure Carbonate of Potassium two troyounces and sixty grains;
Distilled Water four pints.

Add the Iron, and afterwards the Bromine, to a pint and a half of the Distilled Water, stirring the mixture frequently with a glass rod for half an hour. Apply a gentle heat, and, when the liquid assumes a greenish colour, add gradually the Pure Carbonate of Potassium, previously dissolved in a pint and a half of the Distilled Water, until it ceases to produce a precipitate. Continue the heat for

half an hour, and then filter. Wash the precipitate with the remainder of the Distilled Water boiling hot, and again filter. Mix the filtered liquids, and evaporate that crystals may form. Lastly, pour off the mother-water, and, having dried the crystals on bibulous paper, keep them in a well-stopped bottle.

In white crystals, wholly soluble in water, but sparingly soluble in alcohol. Its aqueous solution does not affect the colour of litmus or turmeric, and is not precipitated by chloride of barium. When mixed with starch and treated with chlorine water, it becomes yellow. The salt, when subjected to heat, does not lose weight. Ten grains of it require, for complete precipitation, fourteen and three-tenths grains of nitrate of silver; and the precipitate formed has a yellowish colour.

POTASSII CARBONAS.

CARBONATE OF POTASSIUM.

Take of Impure Carbonate of Potassium thirty-six troy-ounces;

Water two pints and a half.

Dissolve the Impure Carbonate of Potassium in the Water, and filter the solution; then pour it into an iron vessel, and evaporate over a gentle fire until it thickens. Lastly, remove it from the fire, and stir constantly with an iron spatula so as to form a granular salt.

Carbonate of Potassium, treated with nitric acid in excess, exhibits a faint cloudiness on the addition of chloride of barium, and affords a slight precipitate with nitrate of silver. Its aqueous solution, when saturated with an acid, slowly deposits a slightly gelatinous precipitate. In other respects its properties correspond with those of *Pure Carbonate of Potassium*.

POTASSII CARBONAS PURA.

PURE CARBONATE OF POTASSIUM.

Take of Bicarbonate of Potassium, in coarse powder, twelve troyounces;
Distilled Water twelve fluidounces.

Put the Bicarbonate of Potassium into a capacious iron crucible; heat gradually until the water of crystallization is driven off; then raise the heat to redness, and maintain that temperature for half an hour. Having taken the crucible from the fire, and allowed it to cool, dissolve its contents in the Distilled Water, and filter the solution. Pour this into an iron vessel, and evaporate over a gentle fire until it thickens. Lastly, remove it from the fire, and stir constantly with an iron spatula so as to form a granular salt.

A white, deliquescent salt, wholly soluble in water. It effervesces with acids, and changes the colour of turmeric to brown. Its solution yields with bichloride of platinum a yellow precipitate, and with sulphate of magnesium a precipitate which effervesces with acids. When saturated with an acid, it deposits nothing upon standing; and, when treated with pure nitric acid in excess, it is not precipitated by carbonate of sodium, chloride of barium, or nitrate of silver. One hundred grains of the salt lose sixteen grains by exposure to a red heat.

POTASSII CITRAS.

CITRATE OF POTASSIUM.

Take of Citric Acid ten troyounces;
Bicarbonate of Potassium fourteen troyounces;
Water a sufficient quantity.

Dissolve the Citric Acid in a pint of Water, with the aid of a gentle heat, add the Bicarbonate of Potassium gradually, and, when effervescence has ceased, filter the solution and evaporate to dryness, stirring constantly, after a pellicle has begun to form, until the salt granulates. Keep it in a well-stopped bottle.

A whitish, granular, deliquescent salt, wholly and readily soluble in water. Its solution does not affect the colour of litmus, and yields no precipitate with muriatic acid. When heated to redness it affords a residue of pure carbonate of potassium.

POTASSII CYANIDUM.

CYANIDE OF POTASSIUM.

Take of Ferrocyanide of Potassium, dried, eight troy-ounces;

Pure Carbonate of Potassium, dried, three troy-ounces.

Mix the salts intimately, and throw the mixture into a deep iron crucible previously heated to redness. Maintain the temperature until effervescence ceases, and a portion of the fused mass, of a pure white colour, concretes upon a warm glass rod dipped into it. Then pour the liquid carefully into a shallow dish to solidify, ceasing to pour before the salt becomes contaminated with the precipitated iron. Break up the mass while yet warm, and keep the pieces in a well-stopped bottle.

Cyanide of Potassium, thus prepared, is in white, opaque, amorphous pieces, having a sharp, somewhat alkaline and bitter-almond taste, and an alkaline reaction. It is deliquescent in moist air, readily soluble in water when reduced to powder, and sparingly soluble in

alcohol. Its solution exhales the odour of hydrocyanic acid when exposed to the air, effervesces on the addition of an acid, and, when added to a solution of nitrate of silver, yields a precipitate wholly soluble in ammonia.

POTASSII ET SODII TARTRAS.

TARTRATE OF POTASSIUM AND SODIUM.

ROCHELLE SALT.

Take of Carbonate of Sodium twelve troyounces;
Bitartrate of Potassium, in fine powder, sixteen troyounces;
Boiling Water five pints.

Dissolve the Carbonate of Sodium in the Water, and gradually add the Bitartrate of Potassium. Filter the solution, and evaporate until a pellicle begins to form; then set it aside to crystallize. Pour off the mother-water, and dry the crystals on bibulous paper. Lastly, evaporate the mother-water that it may furnish more crystals.

In colourless, transparent crystals, which effloresce slightly in dry air, and are wholly and readily soluble in five times their weight of boiling water. The solution does not affect the colour of litmus, and yields no precipitate with chloride of barium or a dilute solution of nitrate of silver. From a strong solution the mineral acids throw down a crystalline precipitate of bitartrate of potassium.

POTASSII IODIDUM.

IODIDE OF POTASSIUM.

Take of Potassa six troyounces;
Iodine, in fine powder, sixteen troyounces, or a sufficient quantity;
Charcoal, in fine powder, two troyounces;
Distilled Water a sufficient quantity.

To the Potassa, dissolved in three pints of Distilled Water boiling hot, gradually add the Iodine, stirring after each addition until the solution becomes colourless, and continue the additions until the liquid remains slightly coloured from excess of Iodine. Evaporate the solution to dryness, stirring in the Charcoal towards the close of the operation, so that it may be intimately mixed with the dried salt. Rub this to powder, and heat it to dull redness in an iron crucible, maintaining that temperature for fifteen minutes; then, after it has cooled, dissolve the saline matter with Distilled Water, filter the solution, evaporate, and set it aside to crystallize. An additional quantity of crystals may be obtained from the mother-water by evaporating and crystallizing as before.

Iodide of Potassium is in white or transparent crystals, wholly soluble in water and in alcohol. It produces no change in the colour of litmus, and little if any in that of turmeric. Its solution, mixed with dilute sulphuric acid, and afterwards with solution of starch, gradually assumes a purple tint, which at length becomes blue. When tartaric acid is freely added to a strong solution, it occasions a white crystalline precipitate; and the supernatant liquid, if mixed with solution of starch, becomes first purple and finally blue. Bichloride of platinum colours its solution reddish-brown without causing a precipitate, chloride of barium affects it but slightly, and sulphate of iron occasions no change. Ten grains of Iodide of Potassium yield, with an excess of nitrate of silver, a yellow precipitate, which, when washed and dried, weighs fourteen and one-tenth grains. If this precipitate be treated with ammonia, and nitric acid be added to the clear liquid, no precipitate will be produced. Exposed to a dull-red heat, Iodide of Potassium melts, and on cooling concretes into a crystalline pearly mass, without loss of weight; but at a full-red heat it is slowly volatilized without decomposition.

POTASSII SULPHURETUM.

SULPHURET OF POTASSIUM.

Take of Sublimed Sulphur a troyounce;

Carbonate of Potassium two troyounces.

Rub the Carbonate of Potassium, previously dried, with the Sulphur, and heat the mixture gradually in a covered crucible until it ceases to swell, and is completely melted. Then pour the liquid on a marble slab, and, when the mass is cold, break it into pieces, and keep them in a well-stopped bottle of green glass.

Sulphuret of Potassium is of a brownish-yellow colour when freshly broken. It dissolves in water, with the exception of a slight residue, and forms an orange-yellow solution, which exhales the odour of hydrosulphuric acid. When the solution is boiled with an excess of muriatic acid and filtered, it gives a yellow precipitate with bichloride of platinum; and, when the same acid is added to it, hydrosulphuric acid is evolved, and sulphur deposited.

POTASSII TARTRAS.

TARTRATE OF POTASSIUM.

Take of Pure Carbonate of Potassium sixteen troyounces;

Bitartrate of Potassium, in fine powder, thirty-six troyounces, or a sufficient quantity.

Boiling Water eight pints.

Dissolve the Carbonate of Potassium in the Water; then gradually add Bitartrate of Potassium to the solution until it is completely neutralized, and boil. Filter the liquid, evaporate until a pellicle forms, and set it aside to crystallize. Lastly, pour off the mother-water, and, having dried the crystals on bibulous paper, keep them in a well stopped bottle.

In white crystals, which are somewhat deliquescent, and are wholly and readily soluble in four parts of boiling water. The solution yields a crystalline precipitate of bitartrate of potassium upon the addition of most of the acids. Acetate of lead occasions a white precipitate, wholly soluble in dilute nitric acid.

PULVERES.

PULVERES EFFERVESCENTES.

EFFERVESCING POWDERS.

SODA POWDERS.

Take of Bicarbonate of Sodium, in fine powder, three hundred and sixty grains;

Tartaric Acid, in fine powder, three hundred grains.

Divide each of the powders into twelve equal parts, and keep the parts, severally, of the Bicarbonate and of the Acid, in separate papers of different colours.

PULVERES EFFERVESCENTES APERIENTES.

APERIENT EFFERVESCING POWDERS.

SEIDLITZ POWDERS.

Take of Bicarbonate of Sodium, in fine powder, a troyounce;

Tartrate of Potassium and Sodium, in fine powder, three troyounces;

Tartaric Acid, in fine powder, four hundred and twenty grains.

Mix the Bicarbonate of Sodium intimately with the Tartrate of Potassium and Sodium, and divide the mixture into twelve equal parts. Then divide the Tartaric Acid into the same number of equal parts. Lastly, keep the parts, severally, of the mixture and of the Acid, in separate papers of different colours.

PULVIS ALOËS ET CANELLÆ.

POWDER OF ALOES AND CANELLA.

Take of Socotrine Aloes, in fine powder, twelve troyounces;

Canella, in fine powder, three troyounces.

Rub them together until they are thoroughly mixed.

PULVIS AROMATICUS.

AROMATIC POWDER.

Take of Cinnamon, in fine powder,

Ginger, in fine powder, each, two troyounces;

Cardamom, deprived of the capsules, and in fine powder,

Nutmeg, in fine powder, each, a troyounce.

Rub them together until they are thoroughly mixed.

PULVIS IPECACUANHÆ COMPOSITUS.

COMPOUND POWDER OF IPECACUANHA.

DOVER'S POWDER.

Take of Ipecacuanha, in fine powder,

Opium, dried, and in fine powder, each, sixty grains;

Sulphate of Potassium a troyounce.

Rub them together into a very fine powder.

PULVIS JALAPÆ COMPOSITUS.

COMPOUND POWDER OF JALAP.

Take of Jalap, in very fine powder, a troyounce;
Bitartrate of Potassium, in very fine powder, two troyounces.
Rub them together until they are thoroughly mixed.

PULVIS RHEI COMPOSITUS.

COMPOUND POWDER OF RHUBARB.

Take of Rhubarb, in very fine powder, four troyounces;
Magnesia twelve troyounces;
Ginger, in very fine powder, two troyounces.
Rub them together until they are thoroughly mixed.

PYROXYLON.

PYROXYLON.

PYROXYLON.

SOLUBLE GUN COTTON.

Take of Cotton, freed from impurities, half a troyounce;
Nitric Acid three troyounces and a half;
Sulphuric Acid four troyounces.

Mix the Acids gradually, in a porcelain or glass vessel, and, when the temperature of the mixture has fallen to 90°, add the Cotton; by means of a glass rod, imbue it thoroughly with the acid, and allow it to macerate for fifteen hours; then transfer it to a larger vessel, and wash it first with cold water until the washings cease to have an

acid taste, and then with boiling water. Drain the cotton on filtering paper, and dry it by means of a water-bath.

If acids of the proper strength cannot be easily obtained, use for the above quantity of cotton, of Nitric Acid, having a specific gravity from 1.382 to 1.390, four troyounces, and of Sulphuric Acid, having the specific gravity 1.833, ten troyounces, and proceed as directed.

QUINIA.

QUINIÆ SULPHAS.

SULPHATE OF QUINIA.

Take of Yellow Cinchona, in coarse powder, forty-eight troyounces;
Muriatic Acid three troyounces and a half;
Lime, in fine powder, five troyounces,
Animal Charcoal, in fine powder,
Sulphuric Acid,
Alcohol,
Water,
Distilled Water, each, a sufficient quantity.

Boil the Cinchona in thirteen pints of Water mixed with one-third of the Muriatic Acid, and strain through muslin. Boil the residue twice successively with the same quantity of Water and Acid as before, and strain. Mix the decoctions, and, while the liquid is hot, gradually add the Lime previously mixed with two pints of Water, stirring constantly until the quinia is completely precipitated. Wash the precipitate with Distilled Water, and, having

pressed, dried, and powdered it, digest it in boiling Alcohol. Pour off the liquid, and repeat the digestion several times, until the Alcohol is no longer rendered bitter. Mix the liquids, and distil off the alcohol until a brown viscid mass remains. Upon this, transferred to a suitable vessel, pour four pints of Distilled Water, and, having heated the mixture to the boiling point, add enough Sulphuric Acid to dissolve the quinia. Then add a troyounce and a half of Animal Charcoal, boil the liquid for two minutes, filter while hot, and set it aside to crystallize. Should the liquid, before filtration, be entirely neutral, acidulate it very slightly with Sulphuric Acid; should it, on the contrary, change the colour of litmus paper to a bright red, add more Animal Charcoal. Separate the crystals from the liquid, dissolve them in boiling Distilled Water slightly acidulated with Sulphuric Acid, add a little Animal Charcoal, filter the solution, and set it aside to crystallize. Lastly, dry the crystals on bibulous paper with a gentle heat, and keep them in a well-stopped bottle.

The mother-water may be made to yield an additional quantity of Sulphate of Quinia, by precipitating the quinia with Water of Ammonia, and treating the precipitated alkaloid with Distilled Water, Sulphuric Acid, and Animal Charcoal, as before.

A colourless salt, in very light, silky crystals. It is entirely dissolved by about seven hundred and forty parts of cold, or thirty of boiling water, is readily soluble in alcohol, and in water acidulated with sulphuric acid, but is insoluble in ether. The aqueous solution, upon the addition of chlorine and afterwards of ammonia, assumes a green colour. By a moderate heat, the crystals lose from eight to ten

per cent. of water of crystallization, and at a red heat are wholly dissipated. When ten grains of the salt are agitated in a test-tube with ten minims of officinal water of ammonia and sixty grains of ether, and allowed to rest, the resulting liquid separates into two transparent and colourless layers, without any white or crystalline matter at the surface of contact.

QUINIÆ VALERIANAS.

VALERIANATE OF QUINIA.

Take of Valerianic Acid half a troyounce;
Sulphate of Quinia two troyounces;
Diluted Sulphuric Acid,
Water of Ammonia,
Water, each, a sufficient quantity.

Dissolve the Sulphate of Quinia in a pint of Water, with the aid of Diluted Sulphuric Acid; then add Water of Ammonia in slight excess, and wash the precipitated quinia with water until freed from sulphate of ammonia. Dissolve the Valerianic Acid in five pints of Water, heated to 180°, add the quinia to the solution, and, when it is dissolved, set the whole aside for several days to crystallize. Decant the mother-water from the crystals, dry them on bibulous paper, and keep them in a well-stopped bottle.

By evaporating the mother-water at a temperature not exceeding 120°, more crystals may be obtained.

A colourless salt, crystallizing in rhomboidal tables, and having a peculiar, repulsive odour, and bitter taste. When heated it fuses, and gives off white vapours. It is soluble in one hundred and ten parts of cold, or in forty parts of boiling water, and in six parts of cold, or in one part of boiling alcohol. It is also soluble in ether.

RESINÆ.

RESINA JALAPÆ.

RESIN OF JALAP.

Take of Jalap, in fine powder, sixteen troyounces;
Alcohol,
Water, each, a sufficient quantity.

Moisten the Jalap with four fluidounces of Alcohol, pack it firmly in a cylindrical percolator, and gradually pour upon it twelve fluidounces of Alcohol. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, to prevent evaporation, set it aside in a moderately warm place for four days; then, having removed the cork, gradually pour Alcohol upon the surface, and continue the percolation until twenty-four fluidounces have passed, or until the percolate ceases to produce turbidity when dropped into water. Distil off the alcohol, by means of a water-bath, until the tincture is reduced to six fluidounces, and add it, with constant stirring, to seven pints of Water. When the precipitate has subsided, decant the supernatant liquid, and wash the precipitate twice by decantation, with fresh portions of Water. Place it upon a strainer, and, having pressed out the liquid, dry the Resin with a gentle heat.

Resin of Jalap is partly soluble in ether, and the residue, when dissolved in officinal solution of potassa, is not precipitated by the addition of dilute muriatic acid in excess.

RESINA PODOPHYLLI.

RESIN OF MAY-APPLE.

Take of May-apple, in fine powder, sixteen troyounces;
Muriatic Acid two fluidrachms;
Alcohol,
Water, each, a sufficient quantity.

Moisten the May-apple with four fluidounces of Alcohol, pack it firmly in a cylindrical percolator, and gradually pour upon it twelve fluidounces of Alcohol. When the liquid begins to drop from the percolator, close the lower orifice with a cork, and, having closely covered the percolator, to prevent evaporation, set it aside in a moderately warm place for four days; then, having removed the cork, gradually pour Alcohol upon the surface, and continue the percolation until twenty-four fluidounces have passed, or until the percolate ceases to produce turbidity when dropped into water. Distil off the Alcohol, by means of a water-bath, until the tincture is reduced to six fluidounces, and add it, with constant stirring, to seven pints of Water previously mixed with the Muriatic Acid. When the precipitate has subsided, decant the supernatant liquid, and wash the precipitate twice by decantation, with fresh portions of Water. Place it upon a strainer, and, having pressed out the liquid, dry the Resin with a gentle heat.

Resin of May-apple is partly soluble in ether, and the residue, when dissolved in officinal solution of potassa, is precipitated by the addition of dilute muriatic acid in excess.

RESINA SCAMMONII.

RESIN OF SCAMMONY.

Take of Scammony, in fine powder, six troyounces;
Alcohol,
Water, each, a sufficient quantity.

Digest the Scammony with successive portions of boiling Alcohol until exhausted. Mix the tinctures, and reduce the mixture to a syrupy consistence by distilling off the alcohol. Then add the residue to a pint of Water, separate the precipitate formed, wash it thoroughly with Water, and dry it with a gentle heat.

Resin of Scammony is wholly soluble in ether. It dissolves in officinal solution of potassa, and the heated solution is not precipitated by the addition of dilute muriatic acid in excess.

SANTONINUM.

SANTONINUM.

SANTONIN.

Take of Santonica, in moderately coarse powder, forty-eight troyounces;
Lime, recently slaked and in fine powder, eighteen troyounces;
Animal Charcoal, in fine powder,
Diluted Alcohol,
Acetic Acid,
Alcohol, each, a sufficient quantity.

Digest the Santonica and Lime with twelve pints of Diluted Alcohol for twenty-four hours, and express. Re-

peat the digestion and expression twice with the residue, using the same quantity of Diluted Alcohol. Mix the tinctures, and reduce the mixture to eight pints, by distilling off the alcohol. Then, having filtered, and evaporated to one-half, gradually add Acetic Acid until in slight excess, stirring during the addition, and set the whole aside for forty-eight hours. Place the resulting crystalline mass upon a funnel loosely stopped, wash it with water, and dry it. Next, boil the dry residue with ten times its weight of Alcohol, and, having digested the tincture for several hours with Animal Charcoal, filter it while hot, and add enough hot Alcohol, through the filter, to wash the Charcoal thoroughly; then set it aside in a dark place to crystallize. Lastly, dry the crystals on bibulous paper in the dark, and keep them in a well-stopped bottle, protected from the light.

By evaporating the mother-water more crystals may be obtained.

A colourless substance, crystallizing in shining, flattened prisms, without smell, and nearly tasteless when first put into the mouth, but afterwards bitter. It is not altered by the air, but becomes yellow on exposure to light. It melts when heated, and forms, on cooling, a crystalline mass. When heated somewhat above its melting point, it rises unchanged in dense, white, irritating vapours. Nearly insoluble in cold water, it is dissolved by two hundred and fifty parts of boiling water. It is soluble in forty-three parts of cold, or in three parts of boiling alcohol, and in seventy-five parts of ether. Its alcoholic and ethereal solutions are intensely bitter.

SODIUM.

SODA.

SODA.

Take of Solution of Soda a convenient quantity.

Evaporate it rapidly in an iron vessel until ebullition ceases and the Soda melts. Pour this on a flat stone, and when it has congealed, break the mass into pieces, and keep them in a well-stopped bottle.

Soda is very soluble in water and in alcohol. Exposed to the air it first becomes moist, but after some time effloresces. Its aqueous solution has the properties mentioned under "*Liquor Sodæ.*"

SODII ARSENIAS.

ARSENIATE OF SODIUM.

Take of Arsenious Acid, in fine powder, two troy-ounces;
Nitrate of Sodium, in fine powder, eight hundred and sixteen grains;
Dried Carbonate of Sodium, in fine powder, five hundred and twenty-eight grains;
Distilled Water, boiling hot, half a pint.

Having mixed the powders thoroughly, put the mixture into a large clay crucible, and cover it with the lid. Expose it to a full red heat until effervescence has ceased, and complete fusion has taken place. Pour the fused salt on a porcelain slab, and, as soon as it has solidified, and while it is still warm, put it into the hot Water, and stir

until it is dissolved. Filter the solution, and set it aside to crystallize. Drain the crystals, and, having dried them rapidly on filtering paper, keep them in a well-stopped bottle.

In colourless, transparent, prismatic crystals, slightly efflorescent, and soluble in water. The solution is alkaline, and gives white precipitates with chloride of barium, chloride of calcium, and sulphate of zinc, and a brick-red precipitate with nitrate of silver, all of which are soluble in nitric acid. Heated to 300°, it loses 40.38 per cent. of its weight.

SODII BICARBONAS.

BICARBONATE OF SODIUM.

Take of Commercial Bicarbonate of Sodium, in powder, sixty-four troyounces;
Distilled Water six pints.

Introduce the powder into a suitable conical glass percolator, cover it with a piece of wet muslin, and pour the Water gradually upon it. When the liquid has ceased to drop, or when the washings cease to precipitate a solution of sulphate of magnesium, remove the Bicarbonate of Sodium from the percolator, and dry it on bibulous paper, in a warm place.

A white, opaque powder, wholly soluble in water. It does not precipitate a cold solution of sulphate of magnesium, nor is a solution of the salt in forty parts of water precipitated by corrosive sublimate. The precipitate produced by chloride of barium is wholly soluble in nitric acid.

SODII CARBONAS EXSICCATA.

DRIED CARBONATE OF SODIUM.

Take of Carbonate of Sodium a convenient quantity.

Expose it to heat, in an iron vessel, until it is thoroughly dried, stirring constantly with an iron spatula; then rub it into powder.

SODII PHOSPHAS.

PHOSPHATE OF SODIUM.

Take of Bone, calcined to whiteness and in fine powder, one hundred and twenty troyounces;
Sulphuric Acid seventy-two troyounces;
Carbonate of Sodium,
Water, each, a sufficient quantity.

Mix the powder with the Sulphuric Acid, in an earthen vessel; then add eight pints of Water, and, having stirred the mixture thoroughly, digest for three days, occasionally adding a little Water to replace that which is lost by evaporation, and frequently stirring the mixture. At the expiration of that time, pour in eight pints of boiling Water, and strain through muslin, gradually adding more boiling Water until the liquid passes nearly tasteless. Set by the strained liquid that the dregs may subside, and, having poured off the clear solution, boil it down to eight pints. To the concentrated liquid, poured off from the newly formed dregs, and heated in an iron vessel, add, gradually, Carbonate of Sodium previously dissolved in hot Water, until effervescence ceases, and the phosphoric acid is completely neutralized; then filter the liquid and set it aside to

crystallize. Having removed the crystals, add, if necessary, a small quantity of Carbonate of Sodium to the liquid, so as to render it slightly alkaline; then alternately evaporate and crystallize so long as crystals are produced. Keep the crystals in a well-stopped bottle.

In colourless, transparent crystals, which speedily effloresce and become opaque when exposed to the air. It is wholly soluble in water, but insoluble in alcohol. The solution has an alkaline reaction, and does not effervesce with acids. It yields with nitrate of silver a yellow precipitate, and with chloride of barium a white one, both of which are soluble in nitric acid.

SPIRITUS.

SPIRITUS ÆTHERIS COMPOSITUS.

COMPOUND SPIRIT OF ETHER.

HOFFMAN'S ANODYNE.

Take of Ether half a pint;
Alcohol a pint;
Ethereal Oil six fluidrachms.
Mix them.

A colourless, volatile, inflammable liquid, having an aromatic, ethereal odour, and a burning, slightly sweetish taste. Its specific gravity is 0.815. It is neutral or but slightly acid to litmus. It gives only a slight cloudiness with chloride of barium; but, when a fluidounce of it is evaporated to dryness with an excess of this test, it yields a precipitate of sulphate of barium, which, when washed and dried, weighs six and a quarter grains. When a few drops are burned on glass or porcelain, there is no visible residue, but the surface will have an acid taste and reaction. A pint of water, by the admixture of forty drops, is rendered slightly opalescent.

SPIRITUS ÆTHERIS NITROSI.

SPIRIT OF NITROUS ETHER.

SWEET SPIRIT OF NITRE.

Take of Nitric Acid four troyounces and a half;
Stronger Alcohol seven pints;
Sulphuric Acid three troyounces and a half;
Copper two troyounces.

Add the Sulphuric Acid gradually to twenty fluidounces of the Stronger Alcohol; when the mixture has become cool, put it into a glass retort, connected with a Liebig's condenser, and add the Copper and four troyounces of Nitric Acid. Then cautiously apply heat, and distil thirteen fluidounces at a temperature not exceeding 180°. Remove the heat, let the contents of the retort cool to 90°, add the remainder of the Nitric Acid, and distil two fluidounces as before. Mix the distillate with the remainder of the Alcohol, and transfer the mixture immediately to half-pint bottles, which must be well stopped and protected from the light.

Spirit of Nitrous Ether is a volatile, inflammable liquid, of a pale-yellow colour inclining slightly to green, having a fragrant, ethereal odour, free from pungency, and a sharp, burning taste. It slightly reddens litmus, but does not cause effervescence when a crystal of bicarbonate of potassium is dropped into it. When mixed with half its volume of officinal solution of potassa previously diluted with an equal measure of distilled water, it assumes a yellow colour, which slightly deepens, without becoming brown, in twelve hours. A portion of the Spirit in a test-tube half filled with it, plunged into water heated to 145°, and held there until it has acquired that temperature will boil distinctly on the addition of a few small pieces of glass.

Spirit of Nitrous Ether has the specific gravity 0.837, and contains five per cent. of its peculiar ether. It should not be long kept, as it becomes strongly acid by age.

SPIRITUS AMMONIÆ.

SPIRIT OF AMMONIA.

Take of Chloride of Ammonium, in small pieces,
Lime, each, twelve troyounces;
Water six pints;
Alcohol twenty fluidounces.

Upon the Lime, in a convenient vessel, pour a pint of the Water, and stir the mixture so as to bring it to the consistence of a smooth paste. Then add the remainder of the Water, and mix it well with the Lime. Decant the milky liquid from the gritty sediment into a glass retort, of the capacity of sixteen pints, and add the Chloride of Ammonium. Place the retort on a sand-bath, and adapt to it a receiver, previously connected, by means of a glass tube reaching nearly to the bottom of the bottle, with a two-pint bottle containing the Alcohol. Surround the bottle with ice-cold water; and apply a gradually increasing heat, until ammonia ceases to be given off. Lastly, remove the liquid from the bottle, and introduce it into small bottles, which must be well stopped.

SPIRITUS AMMONIÆ AROMATICUS.

AROMATIC SPIRIT OF AMMONIA.

Take of Carbonate of Ammonium a troyounce;
Water of Ammonia three fluidounces;
Oil of Lemon two fluidrachms and a half;

Oil of Nutmeg forty minims;
Oil of Lavender fifteen minims;
Alcohol a pint and a half;
Water a sufficient quantity.

Dissolve the Carbonate in the Water of Ammonia, previously mixed with four fluidounces of Water. Dissolve the Oils in the Alcohol, mix the two solutions, and add sufficient Water to make the whole measure two pints.

SPIRITUS ANISI.

SPIRIT OF ANISE.

Take of Oil of Anise a fluidounce;
Stronger Alcohol fifteen fluidounces.

Dissolve the Oil in the Stronger Alcohol.

SPIRITUS CAMPHORÆ.

SPIRIT OF CAMPHOR.

Take of Camphor four troyounces;
Alcohol two pints.

Dissolve the Camphor in the Alcohol, and filter through paper

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SPIRITUS CHLOROFORMI.

SPIRIT OF CHLOROFORM.

Take of Purified Chloroform a troyounce;
Alcohol twelve fluidounces.

Dissolve the Chloroform in the Alcohol.

SPIRITUS CINNAMOMI.

SPIRIT OF CINNAMON.

Take of Oil of Cinnamon a fluidounce;
Stronger Alcohol fifteen fluidounces.
Dissolve the Oil in the Stronger Alcohol.

SPIRITUS JUNIPERI.

SPIRIT OF JUNIPER.

Take of Oil of Juniper a fluidounce;
Stronger Alcohol three pints.
Dissolve the Oil in the Stronger Alcohol.

SPIRITUS JUNIPERI COMPOSITUS

COMPOUND SPIRIT OF JUNIPER.

Take of Oil of Juniper a fluidrachm and a half;
Oil of Caraway,
Oil of Fennel, each, ten minims;
Alcohol five pints;
Water three pints.
Dissolve the Oils in the Alcohol, add the Water, and mix them.

SPIRITUS LAVANDULÆ.

SPIRIT OF LAVENDER.

Take of Oil of Lavender a fluidounce;
Stronger Alcohol three pints.
Dissolve the Oil in the Stronger Alcohol.

SPIRITUS LAVANDULÆ COMPOSITUS.

COMPOUND SPIRIT OF LAVENDER.

Take of Oil of Lavender a fluidounce;
Oil of Rosemary two fluidrachms;
Cinnamon, in moderately fine powder, two troyounces;
Cloves, in moderately fine powder, half a troyounce;
Nutmeg, in moderately fine powder, a troyounce;
Red Saunders, in moderately fine powder, three hundred and sixty grains;
Alcohol six pints;
Water two pints;
Diluted Alcohol a sufficient quantity.

Dissolve the Oils in the Alcohol, and add the Water. Then mix the powders, and, having moistened the mixture with a fluidounce of the alcoholic solution of the Oils, pack it firmly in a conical percolator, and gradually pour upon it the remainder of the alcoholic solution, and afterwards Diluted Alcohol, until the filtered liquid measures eight pints.

SPIRITUS LIMONIS.

SPIRIT OF LEMON.

ESSENCE OF LEMON.

Take of Oil of Lemon two fluidounces;
Lemon Peel, freshly grated, a troyounce;
Stronger Alcohol two pints.

Dissolve the Oil in the Stronger Alcohol, add the Lemon Peel, macerate for twenty-four hours, and filter through paper.

SPIRITUS MENTHÆ PIPERITÆ.

SPIRIT OF PEPPERMINT.

ESSENCE OF PEPPERMINT.

Take of Oil of Peppermint a fluidounce;

Peppermint, in coarse powder, one hundred and twenty grains;

Stronger Alcohol fifteen fluidounces.

Dissolve the Oil in the Stronger Alcohol, add the Peppermint, macerate for twenty-four hours, and filter through paper.

SPIRITUS MENTHÆ VIRIDIS.

SPIRIT OF SPEARMINT.

ESSENCE OF SPEARMINT.

Take of Oil of Spearmint a fluidounce;

Spearmint, in coarse powder, one hundred and twenty grains;

Stronger Alcohol fifteen fluidounces.

Dissolve the Oil in the Stronger Alcohol, add the Spearmint, macerate for twenty-four hours, and filter through paper.

SPIRITUS MYRISTICÆ.

SPIRIT OF NUTMEG.

Take of Oil of Nutmeg a fluidounce;

Stronger Alcohol three pints.

Dissolve the Oil in the Stronger Alcohol.

STRYCHNIA.

STRYCHNIA.

STRYCHNIA.

Take of Nux Vomica, rasped, forty-eight troyounces;
Lime, in fine powder, six troyounces;
Muriatic Acid three troyounces and a half;
Alcohol,
Diluted Alcohol,
Diluted Sulphuric Acid,
Water of Ammonia,
Purified Animal Charcoal,
Water, each, a sufficient quantity.

Macerate the Nux Vomica, for twenty-four hours, in sixteen pints of Water, acidulated with one-third of the Muriatic Acid; then boil for two hours, and strain with expression through a strong muslin bag. Boil the residue twice successively in the same quantity of acidulated Water, each time straining as before. Mix the decoctions, and evaporate to the consistence of thin syrup; then add the Lime previously mixed with a pint of Water, and boil for ten minutes, frequently stirring. Pour the whole into a double muslin bag, and, having thoroughly washed the precipitate, press, dry, and powder it. Treat the powder repeatedly with Diluted Alcohol, in order to remove the brucia, until the washings are but faintly reddened by nitric acid. Then boil it repeatedly with Alcohol until deprived of bitterness, mix the several tinctures, and distil

off the alcohol by means of a water-bath. Having washed the residue, mix it with a pint of Water, and, applying a gentle heat, drop in enough Diluted Sulphuric Acid to neutralize and dissolve the alkaloid. Then add Purified Animal Charcoal, and, having boiled the mixture for a few minutes, filter, evaporate, and set aside to crystallize. Dissolve the crystals in Water, and add enough Water of Ammonia to precipitate the Strychnia. Lastly, dry this on bibulous paper, and keep it in a well-stopped bottle.

Strychnia, thus prepared, is a white or grayish-white powder, of an intensely bitter taste, nearly insoluble in water, slightly soluble in cold alcohol, and readily soluble in boiling alcohol. When heated it melts, and by a strong heat is wholly dissipated. It is but slightly or not at all reddened by nitric acid. A small portion of it, dissolved in officinal sulphuric acid, yields, on the addition of a minute quantity of bichromate of potassium, a splendid violet colour.

STRYCHNIÆ SULPHAS.

SULPHATE OF STRYCHNIA.

Take of Strychnia a troyounce;

Diluted Sulphuric Acid nine fluidrachms, or a sufficient quantity;

Distilled Water a pint.

Mix the Strychnia with the Distilled Water, heat the mixture gently, and gradually add Diluted Sulphuric Acid until the alkaloid is neutralized and dissolved. Filter the solution, and evaporate with a moderate heat, so that crystals may form on cooling. Lastly, having drained the crystals, dry them rapidly on bibulous paper, and keep them in a well-stopped bottle.

A white salt, in colourless, prismatic crystals, which are without odour, exceedingly bitter, readily soluble in water, sparingly soluble in alcohol, and insoluble in ether. They effloresce on exposure to the air, and melt when heated, losing nearly fourteen per cent. of their weight of water of crystallization. By a strong heat they are wholly volatilized. In other respects they answer to the tests for Strychnia.

SUCCI.

SUCCUS CONII.

JUICE OF CONIUM.

Take of Fresh Conium Leaves a convenient quantity;
Alcohol a sufficient quantity.

Bruise the Leaves thoroughly in a mortar, press out the juice, and to every five measures of juice add one of Alcohol. Set aside the liquid for seven days, and filter. Keep it in a cool place.

SUCCUS TARAXACI

JUICE OF DANDELION.

Take of Fresh Dandelion a convenient quantity;
Alcohol a sufficient quantity.

Bruise the Dandelion thoroughly in a mortar, press out the juice, and to every five measures of juice add one of Alcohol. Set aside the liquid for seven days, and filter. Keep it in a cool place.

SULPHUR.

SULPHUR PRÆCIPITATUM.

PRECIPITATED SULPHUR.

Take of Sublimed Sulphur twelve troyounces;
Lime eighteen troyounces;
Muriatic Acid,
Water, each, a sufficient quantity.

Pour sufficient Water on the Lime to slake it, and, having mixed the Sulphur with it, add fifteen pints of Water to the mixture; then boil for two hours, occasionally adding Water to preserve the measure, and filter. Dilute the filtered liquid with an equal bulk of Water, and drop into it Muriatic Acid so long as a precipitate is produced. Lastly, wash the Precipitated Sulphur repeatedly with Water, until the washings are nearly tasteless, and dry it.

Precipitated Sulphur is entirely dissipated by heat.

SULPHURIS IODIDUM.

IODIDE OF SULPHUR.

Take of Iodine four troyounces;
Sublimed Sulphur a troyounce.

Rub them together until they are thoroughly mixed. Introduce the mixture into a flask, close the orifice loosely, and apply a gentle heat so as to darken the mass without melting it. When the colour has become uniformly dark throughout, increase the heat so as to produce liquefaction, and incline the flask in different directions, in order

to return into the liquid any portions of Iodine which may have been condensed on the inner surface of the vessel. Then withdraw the heat, and, after the liquid has become solid, remove the mass by breaking the flask, reduce it to pieces, and keep them in a well-stopped bottle.

Iodide of Sulphur is a grayish-black, solid substance, having a uniform colour, and a radiated crystalline appearance. It resembles Iodine in smell, and is decomposed upon exposure to the air, giving off the vapour of iodine. It is soluble in about sixty parts of glycerin, but is insoluble in water. It is decomposed by boiling water, and by alcohol, which dissolves out the iodine. If one hundred grains be thoroughly boiled with water, the iodine will pass off in vapour, and about twenty grains of sulphur will remain.

SUPPOSITORIA.

Suppositories are prepared by the following general formula:

Mix the medicinal portion with a small quantity of Oil of Theobroma, by rubbing them together, and add the mixture to the remainder of the Oil of Theobroma previously melted and cooled to the temperature of 95°. Then mix thoroughly without applying more heat, and immediately pour the mixture into suitable moulds, having the capacity of thirty grains each. The moulds, previously made cold, must be kept so by immersion in iced water. All difficulty in removing suppositories from the moulds may be obviated by having the moulds previously dusted with lycopodium. In the absence of suitable moulds, suppositories may be formed by allowing the mixture, pre-

pared as above, to cool, care being taken to keep the ingredients well mixed, and dividing it into parts, each of which shall weigh thirty grains, and may be made into a conical or other convenient form for a suppository.

SUPPOSITORIA ACIDI CARBOLICI.

SUPPOSITORIES OF CARBOLIC ACID.

Take of Carbolic Acid twelve grains;
Oil of Theobroma three hundred and forty-eight grains;
Water a sufficient quantity.

Mix the Carbolic Acid, previously dissolved in a few drops of Water, thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA ACIDI TANNICI.

SUPPOSITORIES OF TANNIC ACID.

Take of Tannic Acid sixty grains;
Oil of Theobroma three hundred grains.

Mix the Tannic Acid thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA ALOES.

SUPPOSITORIES OF ALOES.

Take of Purified Aloes, in very fine powder, sixty grains;

Oil of Theobroma three hundred grains.

Mix the Aloes thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA ASSAFŒTIDÆ.

SUPPOSITORIES OF ASSAFETIDA.

Take of Tincture of Assafetida a fluidounce;

Oil of Theobroma three hundred and twenty grains.

Expose the Tincture of Assafetida to the air, in a capsule, in a moderately warm place, and allow it to evaporate spontaneously until reduced to the consistence of a thick syrup. Mix this thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA BELLADONNÆ

SUPPOSITORIES OF BELLADONNA.

Take of Alcoholic Extract of Belladonna six grains;

Oil of Theobroma three hundred and fifty-four grains;

Water a sufficient quantity.

Having rubbed the Extract of Belladonna into a smooth paste, with the addition of a drop or two of water, mix it thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA MORPHIÆ.

SUPPOSITORIES OF MORPHIA.

Take of Sulphate of Morphia six grains;

Oil of Theobroma three hundred and fifty-four grains.

Mix the Sulphate of Morphia thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 383.

SUPPOSITORIA OPII.

SUPPOSITORIES OF OPIUM.

Take of Extract of Opium twelve grains;

Oil of Theobroma three hundred and forty-eight grains;

Water a sufficient quantity.

Having rubbed the Extract of Opium into a smooth paste, with the addition of a few drops of water, mix it thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA PLUMBI.

SUPPOSITORIES OF LEAD.

Take of Acetate of Lead, in very fine powder, thirty-six grains;

Oil of Theobroma three hundred and twenty-four grains.

Mix the Acetate of Lead thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SUPPOSITORIA PLUMBI ET OPII.

SUPPOSITORIES OF LEAD AND OPIUM.

Take of Acetate of Lead, in very fine powder, thirty-six grains;

Extract of Opium six grains;

Oil of Theobroma three hundred and eighteen grains;

Water a sufficient quantity.

Having rubbed the Acetate of Lead and Extract of Opium into a smooth paste, with the addition of a few drops of Water, mix it thoroughly with sixty grains of the Oil of Theobroma, and then, having melted the remainder of the Oil of Theobroma, proceed according to directions given in the general formula at page 283.

SYRUPI.

SYRUPUS.

SYRUP.

Take of Sugar, in coarse powder, thirty-six troyounces;
Distilled Water a sufficient quantity.

Dissolve the Sugar, with the aid of heat, in twenty fluidounces of Distilled Water, raise the temperature to the boiling point, and strain the solution while hot. Then incorporate with the solution a sufficient quantity of Distilled Water, added through the strainer, to make the Syrup measure two pints and twelve fluidounces, or weigh fifty-five troyounces. Syrup, thus prepared, has the specific gravity 1.317.

SYRUPUS ACACIÆ.

SYRUP OF GUM ARABIC.

Take of Gum Arabic, in pieces, two troyounces;
Sugar, in coarse powder, fourteen troyounces;
Water eight fluidounces.

Dissolve the Gum Arabic in the Water, without heat; then, having added the Sugar, dissolve it with a gentle heat, and strain.

SYRUPUS ACIDI CITRICI.

SYRUP OF CITRIC ACID.

Take of Citric Acid, in fine powder, one hundred and twenty grains;
Oil of Lemon four minims;
Syrup two pints.

Rub the Citric Acid and Oil of Lemon with a fluidounce of the Syrup; then add the mixture to the remainder of the Syrup, and dissolve with a gentle heat.

SYRUPUS ALLII.

SYRUP OF GARLIC.

Take of Garlic, sliced and bruised, six troyounces;
Sugar, in coarse powder, twenty-four troyounces;
Diluted Acetic Acid a pint.

Macerate the Garlic with ten fluidounces of the Diluted Acetic Acid, in a glass vessel, for four days, and express the liquid. Then mix the residue with the remainder of the Acid, and again express until sufficient additional liquid has been obtained to make the whole, when filtered, measure a pint. Lastly, introduce the Sugar into a two-pint bottle, pour upon it the filtered liquid, and agitate until it is dissolved.

SYRUPUS AMYGDALÆ.

SYRUP OF ALMOND.

Take of Sweet Almond twelve troyounces;
Bitter Almond four troyounces;
Sugar, in coarse powder, seventy-two troyounces;
Water three pints.

Having blanched the Almonds, rub them in a mortar to a very fine paste, adding, during the trituration, three fluidounces of the Water and twelve troyounces of the Sugar. Mix the paste thoroughly with the remainder of the Water,

strain with strong expression, add to the strained liquid the remainder of the Sugar, and dissolve it with the aid of a gentle heat. Lastly, strain the solution through muslin, and, having allowed it to cool, keep it in well-stopped bottles in a cool place.

SYRUPUS AURANTII CORTICIS.

SYRUP OF ORANGE PEEL.

Take of Sweet Orange Peel, recently dried and in moderately fine powder, two troyounces;
Carbonate of Magnesium half a troyounce;
Sugar, in coarse powder, twenty-eight troyounces;
Alcohol,
Water, each, a sufficient quantity.

Moisten the Orange Peel with half a fluidounce of Alcohol, introduce it into a conical percolator, and pour Alcohol upon it until six fluidounces of tincture have passed. Evaporate this portion at a temperature not above 120°, to two fluidounces, add the Carbonate of Magnesium and a troyounce of the Sugar, and rub them together, gradually adding half a pint of Water during the trituration. Then filter the liquid, and, having added sufficient Water to make it measure a pint, dissolve in it the remainder of the Sugar with the aid of a gentle heat, and strain.

SYRUPUS AURANTII FLORUM.

SYRUP OF ORANGE FLOWERS.

Take of Orange Flower Water twenty fluidounces;
Sugar, in coarse powder, thirty-six troyounces.

Dissolve the Sugar in the Orange Flower Water, with the aid of a gentle heat.

SYRUPUS FERRI IODIDI.

SYRUP OF IODIDE OF IRON.

Take of Iodine two troyounces;
Iron, in the form of wire and cut in pieces, three hundred grains;
Distilled Water three fluidounces;
Syrup a sufficient quantity.

Mix the Iodine, Iron, and Distilled Water in a flask of thin glass, shake the mixture occasionally until the reaction ceases, and the solution has acquired a green colour and lost the smell of iodine. Then, having introduced a pint of Syrup into a graduated bottle, heat it by means of a water-bath to 212°, and, through a small funnel inserted in the mouth of the bottle, filter into it the solution already prepared. When this has passed, close the bottle, shake it thoroughly, and, when the liquid has cooled, add sufficient Syrup to make the whole measure twenty fluidounces. Lastly, again shake the bottle, and transfer its contents to two-ounce vials, which must be well stopped.

A transparent liquid, of a pale-green colour. It deposits no sediment by keeping, and does not tinge solution of starch blue. Mixed with sulphuric acid it becomes brown, and the mixture emits violet vapours when heated.

SYRUPUS IPECACUANHÆ.

SYRUP OF IPECACUANHA.

Take of Fluid Extract of Ipecacuanha two fluidounces;
Syrup thirty fluidounces.
Mix them.

SYRUPUS KRAMERIÆ.

SYRUP OF RHATANY.

Take of Rhatany, in moderately fine powder, twelve troyounces;
Sugar, in coarse powder, thirty troyounces;
Water a sufficient quantity.

Mix the Rhatany with half a pint of Water, and, having allowed the mixture to stand for two hours, introduce it into a glass percolator, and gradually pour Water upon it until four pints of liquid are obtained. Evaporate this portion, by means of a water-bath, to seventeen fluidounces, and, having added the Sugar, dissolve it with the aid of a gentle heat, and strain the solution while hot.

This Syrup may also be prepared in the following manner:

Take of Fluid Extract of Rhatany twelve fluidounces;
Syrup twenty-four fluidounces.
Mix them.

SYRUPUS LACTUCARII.

SYRUP OF LACTUCARIUM.

Take of Lactucarium a troyounce;
Syrup fourteen fluidounces;
Diluted Alcohol a sufficient quantity.

Rub the Lactucarium with enough Diluted Alcohol, gradually added, to bring it to a syrupy consistence. Then introduce it into a conical percolator, and, having carefully covered the surface with a piece of muslin, gradually pour Diluted Alcohol upon it until half a pint of tincture has passed. Evaporate this portion, by means of a water-bath, at a temperature not exceeding 160°, to two fluidounces, mix it with the Syrup, previously heated, and strain while hot.

SYRUPUS LIMONIS.

SYRUP OF LEMON.

Take of Lemon Juice, recently expressed, and strained, a pint;
Sugar, in coarse powder, forty-eight troyounces;
Water a pint.

Mix the Lemon Juice and Water, and, having added the Sugar to the mixture, dissolve it with the aid of a gentle heat, and strain the solution while hot.

SYRUPUS PRUNI VIRGINIANÆ.

SYRUP OF WILD-CHERRY.

Take of Wild-cherry, in coarse powder, five troyounces;
Sugar, in coarse powder, twenty-eight troyounces;
Water a sufficient quantity.

Moisten the Wild-Cherry thoroughly with Water, and allow it to stand for twenty-four hours in a close vessel; then pack it firmly in a glass percolator, and gradually pour

Water upon it until a pint of filtered liquid is obtained. To this, transferred to a bottle, add the Sugar, and agitate occasionally until it is dissolved.

SYRUPUS RHEI.

SYRUP OF RHUBARB.

Take of Fluid Extract of Rhubarb three fluidounces;
Syrup twenty-nine fluidounces.
Mix them thoroughly.

SYRUPUS RHEI AROMATICUS.

AROMATIC SYRUP OF RHUBARB.

Take of Rhubarb, in moderately fine powder, two troy-ounces and a half;
Cloves, in moderately fine powder,
Cinnamon, in fine powder, each, half a troy-ounce;
Nutmeg, in moderately fine powder, one hundred and twenty grains;
Syrup six pints;
Diluted Alcohol a sufficient quantity.

Mix the powders, and, having moistened the mixture with two fluidounces of Diluted Alcohol, introduce it into a conical percolator, and pour Diluted Alcohol upon it until a pint of tincture has passed. Add this to the Syrup, previously heated, and mix them thoroughly.

SYRUPUS ROSÆ GALLICÆ.

SYRUP OF RED ROSE.

Take of Red Rose, in moderately fine powder, two troyounces;
Sugar, in coarse powder, eighteen troyounces;
Diluted Alcohol,
Water, each, a sufficient quantity.

Moisten the Rose with Diluted Alcohol, pack it firmly in a conical glass percolator, and gradually pour Diluted Alcohol upon it until a fluidounce of tincture has passed. Set this aside, and continue the percolation until five fluidounces more of tincture are obtained. Evaporate this portion with a gentle heat to a fluidounce and a half, and mix it with seven fluidounces of Water. Then, having added the Sugar, dissolve it with the aid of a gentle heat, and strain the solution while hot. Lastly, add the reserved tincture to the solution when it is cold, and mix them thoroughly.

SYRUPUS RUBI.

SYRUP OF BLACKBERRY.

Take of Fluid Extract of Blackberry half a pint;
Syrup a pint and a half.

Mix them.

SYRUPUS SARSAPARILLÆ COMPOSITUS.

COMPOUND SYRUP OF SARSAPARILLA.

Take of Sarsaparilla, in moderately fine powder, twenty-four troyounces;
Guaiacum Wood, in moderately fine powder, three troyounces;

Pale Rose, in moderately fine powder,
Senna, in moderately fine powder,
Liquorice Root, in moderately fine powder, each, two troyounces;
Oil of Sassafras,
Oil of Anise, each, five minims;
Oil of Gaultheria three minims;
Sugar, in coarse powder, ninety-six troyounces;
Water a pint;
Diluted Alcohol a sufficient quantity.

Mix the solid ingredients, except the Sugar, with three pints of Diluted Alcohol, and allow the mixture to stand for four days; then transfer it to a cylindrical percolator, and gradually pour Diluted Alcohol upon it until six pints of tincture have passed. Evaporate this portion, by means of a water-bath, to three pints, add the Water, filter, and, having added the Sugar, dissolve it with the aid of heat, and strain the solution while hot. Lastly, rub the Oils with a small portion of the solution, and mix them thoroughly with the remainder.

SYRUPUS SCILLÆ.

SYRUP OF SQUILL.

Take of Vinegar of Squill a pint;
Sugar, in coarse powder, twenty-four troyounces.

Dissolve the Sugar in the Vinegar of Squill, with the aid of a gentle heat, and strain the solution while hot.

SYRUPUS SCILLÆ COMPOSITUS.

COMPOUND SYRUP OF SQUILL.

Take of Squill, in moderately fine powder,

Seneka, in moderately fine powder, each, four troyounces;

Tartrate of Antimony and Potassium forty-eight grains;

Sugar, in coarse powder, forty-two troyounces;

Diluted Alcohol,

Water, each, a sufficient quantity.

Mix the Squill and Seneka, and, having moistened the mixture with half a pint of Diluted Alcohol, allow it to stand for four days. Then transfer it to a conical percolator, and pour Diluted Alcohol upon it until a pint of tincture has passed. Boil this for a few minutes, evaporate it by means of a water-bath to half a pint, add fourteen fluidounces of boiling Water, and filter. Dissolve the Sugar in the filtered liquid, and, having heated the solution to the boiling point, strain it while hot. Then dissolve the Tartrate of Antimony and Potassium in the solution while still hot, and add enough boiling Water, through the strainer, to make it measure three pints. Lastly, mix the whole thoroughly together.

SYRUPUS SENEGÆ.

SYRUP OF SENEKA.

Take of Seneka, in moderately fine powder, four troyounces;
Sugar, in coarse powder, fifteen troyounces;
Diluted Alcohol two pints.

Moisten the Seneka with two fluidounces of the Diluted Alcohol; then transfer it to a conical percolator, and gradually pour on it the remainder of the Diluted Alcohol. When the tincture has ceased to pass, evaporate it, by means of a water-bath, at a temperature not exceeding 160°, to half a pint; then filter, and, having added the Sugar, dissolve it with the aid of a gentle heat, and strain the solution while hot.

SYRUPUS TOLUTANUS.

SYRUP OF TOLU.

Take of Tincture of Tolu two fluidounces;
Carbonate of Magnesium one hundred and twenty grains;
Sugar, in coarse powder, twenty-six troyounces;
Water a pint.

Rub the Tincture of Tolu first with the Carbonate of Magnesium and two troyounces of the Sugar, and then with the Water, gradually added, and filter. To the filtered liquid add the remainder of the Sugar, and, having dissolved it with the aid of a gentle heat, strain the solution while hot.

SYRUPUS ZINGIBERIS.

SYRUP OF GINGER.

Take of Fluid Extract of Ginger a fluidounce;
Carbonate of Magnesium one hundred and sixty grains;
Sugar, in coarse powder, seventy-two troyounces;
Water forty-two fluidounces.

Rub the Fluid Extract of Ginger first with the Carbonate of Magnesium and two troyounces of the Sugar, and then with the Water, gradually added, and filter. To the filtered liquid add the remainder of the Sugar, and, having dissolved it with the aid of a gentle heat, strain the solution while hot.

TINCTURÆ.

When Tinctures are prepared by percolation, great care should be taken to observe the directions given at page 3; so that the substances treated may be, as far as possible, exhausted of their soluble principles, and a perfectly clear liquid obtained. When prepared by maceration, they require to be frequently shaken during the process, which should be conducted in glass bottles, well stopped.

TINCTURA ACONITI RADICIS.

TINCTURE OF ACONITE ROOT.

Take of Aconite Root, in fine powder, twelve troyounces;
Alcohol a sufficient quantity.

Moisten the powder with six fluidounces of Alcohol, pack it firmly in a cylindrical percolator, and gradually pour Alcohol upon it until two pints of tincture are obtained.

TINCTURA ALOES.

TINCTURE OF ALOES.

Take of Socotrine Aloes, in fine powder, a troyounce;
Liquorice three troyounces;
Alcohol half a pint;
Distilled Water a pint and a half.

Macerate for seven days, and filter through paper.

TINCTURA ALOES ET MYRRHÆ.

TINCTURE OF ALOES AND MYRRH.

Take of Socotrine Aloes, in moderately fine powder,
Myrrh, in moderately fine powder, each, three troyounces;
Alcohol a sufficient quantity.

Mix the powders, and, having moistened the mixture with two fluidounces of Alcohol, pack it moderately in a conical percolator, and gradually pour Alcohol upon it until two pints of tincture are obtained.

This Tincture may also be prepared by macerating the powders with two pints of Alcohol for seven days, and filtering through paper.

TINCTURA ARNICÆ.

TINCTURE OF ARNICA.

Take of Arnica six troyounces;
Alcohol a pint and a half;
Water half a pint;
Diluted Alcohol a sufficient quantity.

Mix the Alcohol and Water, and, having moistened the Arnica slightly with a portion of the mixture, bruise it thoroughly in a mortar. Then pack it firmly in a cylindrical percolator, and pour upon it the remainder of the mixture, and afterwards Diluted Alcohol, until two pints of tincture are obtained.

TINCTURA ASSAFŒTIDÆ.

TINCTURE OF ASSAFETIDA.

Take of Assafetida, bruised, four troyounces;
Alcohol two pints.

Macerate for seven days, and filter through paper.

TINCTURA AURANTII.

TINCTURE OF ORANGE PEEL.

Take of Bitter Orange Peel, in moderately fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of Tincture are obtained.

TINCTURA BELLADONNÆ.

TINCTURE OF BELLADONNA.

Take of Belladonna Leaves, recently dried and in fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it firmly in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA BENZOINI.

TINCTURE OF BENZOIN.

Take of Benzoin, in moderately coarse powder, six troyounces;
Alcohol two pints.

Macerate for seven days, and filter through paper.

TINCTURA BENZOINI COMPOSITA.

COMPOUND TINCTURE OF BENZOIN.

Take of Benzoin, in coarse powder, three troyounces;
Socotrine Aloes, in coarse powder, half a troyounce;
Storax two troyounces;

Balsam of Tolu a troyounce;
Alcohol two pints;

Macerate for seven days, and filter through paper.

TINCTURA CALUMBÆ.

TINCTURE OF COLUMBO.

Take of Columbo, in moderately fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, transfer it to a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CANNABIS

TINCTURE OF HEMP.

Take of Extract of Indian Hemp three hundred and sixty grains;
Alcohol a pint.

Dissolve the Extract in the Alcohol, and filter through paper.

TINCTURA CANTHARIDIS.

TINCTURE OF CANTHARIDES.

Take of Cantharides, in fine powder, a troyounce;
Diluted Alcohol a sufficient quantity.

Moisten the powder with half a fluidounce of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CAPSICI.

TINCTURE OF CAPSICUM.

Take of Capsicum, in fine powder, a troyounce;
Diluted Alcohol a sufficient quantity.

Moisten the powder with half a fluidounce of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CARDAMOMI.

TINCTURE OF CARDAMOM.

Take of Cardamom, in fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it firmly in a cylindrical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CARDAMOMI COMPOSITA.

COMPOUND TINCTURE OF CARDAMOM.

Take of Cardamom, in moderately fine powder, three hundred and sixty grains;
Caraway, in moderately fine powder, one hundred and twenty grains;
Cinnamon, in moderately fine powder, three hundred grains;
Cochineal, in moderately fine powder, sixty grains;

Clarified Honey two troyounces;
Diluted Alcohol a sufficient quantity.

Mix the powders, and, having moistened the mixture with half a fluidounce of Diluted Alcohol, pack it in a cylindrical percolator, and gradually pour Diluted Alcohol upon it until two pints and six fluidounces of tincture are obtained. Lastly, mix this with the Clarified Honey, and filter through paper.

TINCTURA CASTOREI.

TINCTURE OF CASTOR.

Take of Castor, bruised, two troyounces;
Alcohol two pints.

Macerate for seven days, express, and filter through paper.

TINCTURA CATECHU.

TINCTURE OF CATECHU.

Take of Catechu, in moderately fine powder, three troyounces;
Cinnamon, in moderately fine powder, two troyounces;
Diluted Alcohol a sufficient quantity.

Mix the powders, and, having moistened the mixture with a fluidounce of Diluted Alcohol, pack it in a conical glass percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CINCHONÆ.

TINCTURE OF CINCHONA.

Take of Yellow Cinchona, in moderately fine powder, six troyounces;

Alcohol,

Water, each, a sufficient quantity.

Mix three measures of Alcohol with one of Water. Moisten the powder with two fluidounces of the mixture, pack it firmly in a conical glass percolator, and gradually pour the mixture upon it until two pints of tincture are obtained.

TINCTURA CINCHONÆ COMPOSITA.

COMPOUND TINCTURE OF CINCHONA.

Take of Red Cinchona, in moderately fine powder, four troyounces;

Bitter Orange Peel, in moderately fine powder, three troyounces;

Serpentaria, in moderately fine powder, three hundred and sixty grains;

Alcohol,

Water, each, a sufficient quantity.

Mix three measures of Alcohol with one of Water. Having mixed the powders, moisten them with four fluidounces of the menstruum, pack them firmly in a conical glass percolator, and gradually pour on the menstruum until two pints and a half of tincture are obtained.

TINCTURA CINNAMOMI.

TINCTURE OF CINNAMON.

Take of Cinnamon, in fine powder, three troyounces;
Alcohol,
Water, each, a sufficient quantity.

Mix two measures of Alcohol with one of Water. Moisten the powder with a fluidounce of the mixture, pack it moderately in a conical percolator, and gradually pour the mixture upon it until two pints of filtered liquid are obtained.

TINCTURA COLCHICI.

TINCTURE OF COLCHICUM.

Take of Colchicum Seed, in moderately fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a cylindrical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CONII.

TINCTURE OF CONIUM.

Take of Conium Leaves, recently dried and in fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it firmly in a conical percolator, and gradu-

ally pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA CUBEBÆ.

TINCTURE OF CUBEB.

Take of Cubeb, in moderately fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA DIGITALIS.

TINCTURE OF DIGITALIS.

Take of Digitalis, recently dried and in fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it firmly in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA FERRI CHLORIDI.

TINCTURE OF CHLORIDE OF IRON.

Take of Solution of Chloride of Iron half a pint;
Alcohol a pint and a half.

Mix them, and preserve the mixture in a well-stopped bottle.

TINCTURA GALLÆ.

TINCTURE OF NUTGALL.

Take of Nutgall, in moderately fine powder, four troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a glass percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA GENTIANÆ COMPOSITA.

COMPOUND TINCTURE OF GENTIAN.

Take of Gentian, in moderately fine powder, two troyounces;

Bitter Orange Peel, in moderately fine powder, a troyounce;

Cardamom, in moderately fine powder, half a troyounce;

Diluted Alcohol a sufficient quantity.

Mix the powders, and, having moistened the mixture with a fluidounce and a half of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA GUAIACI.

TINCTURE OF GUAIAC.

Take of Guaiac, in moderately coarse powder, six troyounces;

Alcohol a sufficient quantity.

Mix the powder thoroughly with an equal bulk of dry sand, pack the mixture moderately in a conical percolator, and, having covered it with a layer of sand, gradually pour Alcohol upon it until two pints of tincture are obtained.

TINCTURA GUAIACI AMMONIATA.

AMMONIATED TINCTURE OF GUAIAC.

Take of Guaiac, in moderately coarse powder, six troyounces;

Aromatic Spirit of Ammonia two pints.

Macerate for seven days, and filter through paper.

TINCTURA HELLEBORI.

TINCTURE OF BLACK HELLEBORE.

Take of Black Hellebore, in moderately fine powder, four troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a cylindrical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA HUMULI.

TINCTURE OF HOPS.

Take of Hops, in moderately coarse powder, five troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it very firmly in a cylindrical percolator, and

gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA HYOSCYAMI.

TINCTURE OF HYOSCYAMUS.

Take of Hyoscyamus Leaves, recently dried, and in fine powder, four troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it firmly in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA IODINII.

TINCTURE OF IODINE.

Take of Iodine a troyounce;

Alcohol a pint.

Dissolve the Iodine in the Alcohol.

TINCTURA IODINII COMPOSITA.

COMPOUND TINCTURE OF IODINE.

Take of Iodine half a troyounce;

Iodide of Potassium a troyounce;

Alcohol a pint.

Dissolve the Iodine and Iodide of Potassium in the Alcohol.

TINCTURA JALAPÆ.

TINCTURE OF JALAP.

Take of Jalap, in fine powder, six troyounces;
Alcohol,
Water, each, a sufficient quantity.

Mix two measures of Alcohol with one of Water. Then moisten the powder with two fluidounces of the mixture, pack it moderately in a cylindrical percolator, and gradually pour the mixture upon it until two pints of tincture are obtained.

TINCTURA KINO.

TINCTURE OF KINO.

Take of Kino, in fine powder, three hundred and sixty grains;
Alcohol,
Water, each, a sufficient quantity.

Mix two measures of Alcohol with one of Water. Then mix the powder thoroughly with an equal bulk of dry sand, and, having introduced the mixture into a conical glass percolator, gradually pour the menstruum upon it until half a pint of tincture is obtained.

TINCTURA KRAMERIÆ.

TINCTURE OF RHATANY.

Take of Rhatany, in moderately fine powder, six troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it in a cylindrical glass percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA LOBELIÆ.

TINCTURE OF LOBELIA.

Take of Lobelia, in fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Diluted Alcohol, pack it firmly in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA LUPULINÆ.

TINCTURE OF LUPULIN.

Take of Lupulin four troyounces;
Alcohol a sufficient quantity.

Pack the Lupulin in a narrow cylindrical percolator, and gradually pour Alcohol upon it until two pints of tincture are obtained.

TINCTURA MYRRHÆ.

TINCTURE OF MYRRH.

Take of Myrrh, in moderately coarse powder, three troyounces;
Alcohol a sufficient quantity.

Introduce the powder into a conical percolator, press it moderately, and gradually pour Alcohol upon it until two pints of tincture are obtained.

TINCTURA NUCIS VOMICÆ.

TINCTURE OF NUX VOMICA.

Take of Nux Vomica, in fine powder, eight troyounces;
Alcohol a sufficient quantity.

Mix the powder with a pint of Alcohol, and digest for twenty-four hours, in a close vessel, with a gentle heat; then transfer the mixture to a cylindrical percolator, and gradually pour Alcohol upon it until two pints of tincture are obtained.

TINCTURA OPII.

TINCTURE OF OPIUM.

LAUDANUM.

Take of Opium, dried, and in moderately fine powder, two troyounces and a half;
Water,
Alcohol, each, a pint;
Diluted Alcohol a sufficient quantity.

Macerate the Opium with the Water for three days, with frequent agitation; then add the Alcohol, and continue the maceration for three days longer. Introduce the mixture into a percolator, and, when the liquid has ceased to pass, pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA OPII ACETATA.

ACETATED TINCTURE OF OPIUM.

Take of Opium, dried, and in moderately fine powder, two troyounces;

Distilled Vinegar twelve fluidounces;
Alcohol half a pint.

Rub the Opium with the Distilled Vinegar; then add the Alcohol, and, having macerated for seven days, express, and filter through paper.

TINCTURA OPII CAMPHORATA.

CAMPHORATED TINCTURE OF OPIUM.

Take of Opium, dried, and in moderately fine powder,
Benzoic Acid, each, sixty grains;
Camphor forty grains;
Oil of Anise a fluidrachm;
Clarified Honey two troyounces;
Diluted Alcohol two pints.

Mix the ingredients in a suitable bottle, macerate for seven days, and filter through paper.

TINCTURA OPII DEODORATA.

DEODORIZED TINCTURE OF OPIUM.

Take of Opium, dried, and in moderately fine powder,
two troyounces and a half;
Ether,
Alcohol, each, half a pint;
Water a sufficient quantity.

Macerate the Opium with half a pint of Water for twenty-four hours, and express; then repeat the operation twice with the same quantity of Water. Mix the expressed liquids, and, having evaporated the mixture to four fluidounces, allow it to cool, and shake it repeatedly, in a bottle,

with the Ether. Pour off the ethereal solution when it has separated by standing, and evaporate the remaining liquid until all traces of ether have disappeared. Mix the residue with twenty fluidounces of Water, and filter the mixture through paper. When the liquid has ceased to pass, add enough Water, through the filter, to make the filtered liquid measure a pint and a half. Lastly, add the Alcohol, and mix them together.

TINCTURA QUASSIÆ.

TINCTURE OF QUASSIA.

Take of Quassia, in moderately fine powder, two troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA RHEI.

TINCTURE OF RHUBARB.

Take of Rhubarb, in moderately coarse powder, three troyounces;

Cardamom, in moderately fine powder, half a troyounce;

Diluted Alcohol a sufficient quantity.

Mix the powders, and, having moistened the mixture with a fluidounce of Diluted Alcohol, pack it moderately in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA RHEI ET SENNÆ.

TINCTURE OF RHUBARB AND SENNA.

Take of Rhubarb, in moderately coarse powder, a troyounce;
Senna, in moderately coarse powder, one hundred and twenty grains;
Coriander, in moderately coarse powder,
Fennel, in moderately coarse powder, each, sixty grains;
Liquorice, in moderately coarse powder, thirty grains;
Raisins, deprived of their seeds, six troyounces;
Diluted Alcohol three pints.

Macerate for seven days, express, and filter through paper.

TINCTURA SANGUINARIÆ.

TINCTURE OF BLOODROOT.

Take of Bloodroot, in moderately fine powder, four troyounces;
Alcohol,
Water, each, a sufficient quantity.

Mix three measures of Alcohol with one of Water. Moisten the powder with a fluidounce of the mixture, pack it in a conical percolator, and gradually pour the menstruum upon it until two pints of tincture are obtained.

TINCTURA SCILLÆ.

TINCTURE OF SQUILL.

Take of Squill, in moderately coarse powder, four troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA SERPENTARIÆ.

TINCTURE OF SERPENTARIA.

Take of Serpentaria, in moderately fine powder, four troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA STRAMONII.

TINCTURE OF STRAMONIUM.

Take of Stramonium Seed, in moderately fine powder, four troyounces;

Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA TOLUTANA.

TINCTURE OF TOLU.

Take of Balsam of Tolu three troyounces;
Alcohol two pints.

Macerate the Balsam with the Alcohol until it is dissolved; then filter through paper.

TINCTURA VALERIANÆ.

TINCTURE OF VALERIAN.

Take of Valerian, in moderately fine powder, four troyounces;
Diluted Alcohol a sufficient quantity.

Moisten the powder with a fluidounce of Diluted Alcohol, pack it in a conical percolator, and gradually pour Diluted Alcohol upon it until two pints of tincture are obtained.

TINCTURA VALERIANÆ AMMONIATA.

AMMONIATED TINCTURE OF VALERIAN.

Take of Valerian, in moderately fine powder, four troyounces;
Aromatic Spirit of Ammonia two pints.

Macerate for seven days, express, and filter through paper.

TINCTURA VERATRI VIRIDIS.

TINCTURE OF AMERICAN HELLEBORE.

Take of American Hellebore, in moderately fine powder, sixteen troyounces;
Alcohol a sufficient quantity.

Moisten the powder with four fluidounces of Alcohol, pack it firmly in a cylindrical percolator, and gradually pour Alcohol upon it until two pints of tincture are obtained.

TINCTURA ZINGIBERIS.

TINCTURE OF GINGER.

Take of Ginger, in fine powder, eight troyounces;
Alcohol a sufficient quantity.

Moisten the powder with two fluidounces of Alcohol, pack it firmly in a cylindrical percolator, and gradually pour Alcohol upon it until two pints of tincture are obtained.

TROCHISCI.

TROCHISCI ACIDI TANNICI.

TROCHES OF TANNIC ACID.

Take of Tannic Acid a troyounce; 1 gr ℈ ℔
Sugar, in fine powder, ten troyounces;
Tragacanth, in fine powder, one hundred and twenty grains;
Orange Flower Water a sufficient quantity.

Rub the powders together until they are thoroughly mixed; then with the Orange Flower Water form a mass, to be divided into four hundred and eighty troches.

TROCHISCI CRETÆ.

TROCHES OF CHALK.

Take of Prepared Chalk four troyounces;
Gum Arabic, in fine powder, a troyounce;
Nutmeg, in fine powder, sixty grains;
Sugar, in fine powder, six troyounces.

Rub them together until they are thoroughly mixed; then with water form a mass, to be divided into four hundred and eighty troches.

TROCHISCI CUBEBÆ.

TROCHES OF CUBEB.

Take of Oleoresin of Cubeb half a fluidounce;
Oil of Sassafras a fluidrachm;
Liquorice, in fine powder, four troyounces;
Gum Arabic, in fine powder, two troyounces;
Sugar, in fine powder, three troyounces;
Syrup of Tolu a sufficient quantity.

Rub the powders together until they are thoroughly mixed; then add the Oleoresin and Oil, and incorporate them with the mixture. Lastly, with Syrup of Tolu form a mass, to be divided into four hundred and eighty troches.

TROCHISCI FERRI SUBCARBONATIS.

TROCHES OF SUBCARBONATE OF IRON.

Take of Subcarbonate of Iron five troyounces;
Vanilla thirty grains;
Sugar, in fine powder, fifteen troyounces;
Mucilage of Tragacanth a sufficient quantity.

Rub the Vanilla first with a part of the Sugar into a

uniform powder, and afterwards with the Subcarbonate of Iron and the remainder of the Sugar, until they are thoroughly mixed. Then with Mucilage of Tragacanth form a mass, to be divided into four hundred and eighty troches.

TROCHISCI GLYCYRRHIZÆ ET OPII.

TROCHES OF LIQUORICE AND OPIUM.

Take of Extract of Opium, in fine powder, twenty-four grains;
Liquorice, in fine powder, two troyounces;
Gum Arabic, in fine powder, a troyounce;
Sugar, in fine powder, three troyounces;
Oil of Anise fifteen minims.

Rub the powders together until they are thoroughly mixed; then add the Oil of Anise, and incorporate it with the mixture. Lastly, with water form a mass, to be divided into four hundred and eighty troches.

TROCHISCI IPECACUANHÆ.

TROCHES OF IPECACUANHA.

Take of Ipecacuanha, in fine powder,
Tragacanth, in fine powder, each, one hundred and twenty grains;
Arrow-Root, in fine powder, two troyounces;
Sugar, in fine powder, eight troyounces;
Syrup of Orange Peel a sufficient quantity.

Rub the powders together until they are thoroughly mixed; then with Syrup of Orange Peel form a mass, to be divided into four hundred and eighty troches.

TROCHISCI MAGNESIÆ.

TROCHES OF MAGNESIA.

Take of Magnesia three troyounces;
Nutmeg, in fine powder, sixty grains;
Sugar, in fine powder, nine troyounces;
Mucilage of Tragacanth a sufficient quantity.

Rub the Magnesia and the powders together until they are thoroughly mixed; then with Mucilage of Tragacanth form a mass, to be divided into four hundred and eighty troches.

TROCHISCI MENTHÆ PIPERITÆ.

TROCHES OF PEPPERMINT.

Take of Oil of Peppermint a fluidrachm;
Sugar, in fine powder, twelve troyounces;
Mucilage of Tragacanth a sufficient quantity.

Rub the Oil of Peppermint and the Sugar together until they are thoroughly mixed; then with Mucilage of Tragacanth form a mass, to be divided into four hundred and eighty troches.

TROCHISCI MORPHIÆ ET IPECACUANHÆ.

TROCHES OF MORPHIA AND IPECACUANHA.

Take of Sulphate of Morphia twelve grains;
Ipecacuanha, in fine powder, forty grains;
Sugar, in fine powder, ten troyounces;
Oil of Gaultheria five minims;
Mucilage of Tragacanth a sufficient quantity.

Rub the powders together until they are thoroughly mixed; then add the Oil of Gaultheria, and incorporate it

with the mixture. Lastly, with Mucilage of Tragacanth form a mass, to be divided into four hundred and eighty troches.

TROCHISCI POTASSII CHLORATIS.

TROCHES OF CHLORATE OF POTASSIUM.

Take of Chlorate of Potassium, in fine powder, five troyounces;
Sugar, in fine powder, eighteen troyounces;
Tragacanth, in fine powder, two troyounces;
Vanilla thirty grains.

Rub the Vanilla with a small quantity of the Sugar into a uniform powder, and mix this thoroughly with the remainder of the powders, avoiding pressure; then with water form a mass, to be divided into four hundred and eighty troches.

TROCHISCI SANTONINI.

TROCHES OF SANTONIN.

Take of Santonin, in fine powder, half a troyounce;
Sugar, in fine powder, eighteen troyounces;
Tragacanth, in fine powder, half a troyounce;
Orange Flower Water a sufficient quantity.

Rub the powders together until they are thoroughly mixed; then with Orange Flower Water form a mass, to be divided into four hundred and eighty troches.

TROCHISCI SODII BICARBONATIS.

TROCHES OF BICARBONATE OF SODIUM.

Take of Bicarbonate of Sodium three troyounces;
Sugar, in fine powder, nine troyounces;
Nutmeg, in fine powder, sixty grains;
Mucilage of Tragacanth a sufficient quantity.

Rub the Bicarbonate of Sodium and the Sugar together until they are thoroughly mixed; then with Mucilage of Tragacanth form a mass, to be divided into four hundred and eighty troches.

TROCHISCI ZINGIBERIS.

TROCHES OF GINGER.

Take of Tincture of Ginger two fluidounces;
Tragacanth, in fine powder, half a troyounce;
Sugar, in fine powder, twenty troyounces;
Syrup of Ginger a sufficient quantity.

Mix the Tincture of Ginger with the Sugar, and, having exposed the mixture to the air until dry, reduce it to fine powder; to this add the Tragacanth, and mix thoroughly. Lastly, with Syrup of Ginger form a mass, to be divided into four hundred and eighty troches.

UNGUENTA.

UNGUENTUM.

OINTMENT.

Unguentum Adipis, *Pharm.*, 1860.

Take of Lard eight troyounces;

Yellow Wax two troyounces.

Melt the Wax, and add the Lard gradually; then stir the mixture constantly while cooling.

UNGUENTUM ACIDI CARBOLICI.

OINTMENT OF CARBOLIC ACID.

Take of Carbolic Acid sixty grains;

Ointment four hundred and twenty grains.

Mix them thoroughly.

UNGUENTUM ACIDI TANNICI.

OINTMENT OF TANNIC ACID.

Take of Tannic Acid thirty grains;

Lard a troyounce.

Rub the Tannic Acid with the Lard, gradually added, until they are thoroughly mixed, avoiding the use of an iron spatula.

UNGUENTUM ANTIMONII.

ANTIMONIAL OINTMENT.

Take of Tartrate of Antimony and Potassium, in very fine powder, one hundred grains;

Lard four hundred grains.

Rub the Tartrate of Antimony and Potassium with the Lard, gradually added, until they are thoroughly mixed.

UNGUENTUM AQUÆ ROSÆ.

OINTMENT OF ROSE WATER.

Take of Expressed Oil of Almond three troyounces and a half;
Spermaceti a troyounce;
White Wax one hundred and twenty grains;
Rose Water two fluidounces.

Melt together, by means of a water-bath, the Oil, Spermaceti, and Wax; then gradually add the Rose Water, and stir the mixture constantly while cooling.

UNGUENTUM BELLADONNÆ.

OINTMENT OF BELLADONNA.

Take of Extract of Belladonna sixty grains;
Water half a fluidrachm;
Lard four hundred and twenty grains.

Rub the Extract with the Water until uniformly soft, then gradually add the Lard, and thoroughly mix them.

UNGUENTUM BENZOINI.

OINTMENT OF BENZOIN.

Take of Tincture of Benzoin two fluidounces;
Lard sixteen troyounces.

Melt the Lard by means of a water-bath, add the Tincture of Benzoin, constantly stirring, and, when the alcohol has evaporated, remove the ointment from the water-bath, and stir while cooling.

UNGUENTUM CANTHARIDIS.

OINTMENT OF CANTHARIDES.

Take of Cantharides Cerate one hundred and twenty grains;

Resin Cerate three hundred and sixty grains.

Mix them thoroughly.

UNGUENTUM CREASOTI.

OINTMENT OF CREASOTE.

Take of Creasote half a fluidrachm;

Lard a troyounce.

Mix them thoroughly.

UNGUENTUM GALLÆ.

OINTMENT OF NUTGALL.

Take of Nutgall, in very fine powder, sixty grains;

Lard four hundred and twenty grains.

Rub the Nutgall with the Lard, gradually added, until they are thoroughly mixed.

UNGUENTUM HYDRARGYRI.

MERCURIAL OINTMENT.

Take of Mercury twenty-four troyounces;

Lard,

Suet, each, twelve troyounces.

Rub the Mercury with a troyounce of the Suet, and a small portion of the Lard, until the globules cease to be visible; then add the remainder of the Lard, and of the Suet softened with a gentle heat, and thoroughly mix them.

UNGUENTUM HYDRARGYRI AMMONIATI.

OINTMENT OF AMMONIATED MERCURY.

Take of Ammoniated Mercury, in very fine powder, forty grains;
Ointment a troyounce.

Rub the Ammoniated Mercury with the Ointment, gradually added, until they are thoroughly mixed.

UNGUENTUM HYDRARGYRI IODIDI RUBRI.

OINTMENT OF RED IODIDE OF MERCURY.

Take of Red Iodide of Mercury, in very fine powder, sixteen grains;
Ointment a troyounce.

Rub the Iodide of Mercury with the Ointment, gradually added, until they are thoroughly mixed.

UNGUENTUM HYDRARGYRI NITRATIS.

OINTMENT OF NITRATE OF MERCURY.

Take of Mercury a troyounce and a half;
Nitric Acid three troyounces and a half;
Lard sixteen troyounces and a half.

Dissolve the Mercury in the Acid; then heat the Lard in an earthen vessel, and, when the temperature reaches 200°, remove it from the fire. To this add the mercurial solution, and, with a wooden spatula, stir constantly so long as effervescence continues, and afterwards occasionally until the ointment stiffens.

UNGUENTUM HYDRARGYRI OXIDI FLAVI.

OINTMENT OF YELLOW OXIDE OF MERCURY.

Take of Yellow Oxide of Mercury, in very fine powder, sixty grains;

Ointment four hundred and twenty grains.

Rub the Oxide of Mercury with the Ointment, gradually added, until they are thoroughly mixed.

UNGUENTUM HYDRARGYRI OXIDI RUBRI.

OINTMENT OF RED OXIDE OF MERCURY.

Take of Red Oxide of Mercury, in very fine powder, sixty grains;

Ointment four hundred and twenty grains.

Rub the Oxide of Mercury with the Ointment, gradually added, until they are thoroughly mixed.

UNGUENTUM IODINII.

IODINE OINTMENT.

Take of Iodine twenty grains;

Iodide of Potassium four grains;

Water six minims;

Lard a troyounce.

Rub the Iodine and Iodide of Potassium first with the Water, and then with the Lard, until they are thoroughly mixed.

UNGUENTUM IODINII COMPOSITUM.

COMPOUND IODINE OINTMENT.

Take of Iodine fifteen grains;

Iodide of Potassium thirty grains;

Water thirty minims;
Lard a troyounce.

Rub the Iodine and Iodide of Potassium first with the Water, and then with the Lard, until they are thoroughly mixed.

UNGUENTUM MEZEREI.

MEZEREON OINTMENT.

Take of Fluid Extract of Mezereon four fluidounces;
Lard fourteen troyounces;
Yellow Wax two troyounces.

Melt the Lard and Wax together with a moderate heat, add the Fluid Extract of Mezereon, and stir the mixture constantly until the alcohol has evaporated; then continue to stir while cooling.

UNGUENTUM PICIS LIQUIDÆ.

TAR OINTMENT.

Take of Tar,
Suet, each, twelve troyounces.

Mix the Tar with the Suet previously melted with a moderate heat, and, having strained the mixture through muslin, stir it constantly while cooling.

UNGUENTUM PLUMBI CARBONATIS.

OINTMENT OF CARBONATE OF LEAD.

Take of Carbonate of Lead, in very fine powder, sixty grains;
Ointment four hundred and twenty grains.

Rub the Carbonate of Lead with the Ointment, gradually added, until they are thoroughly mixed.

UNGUENTUM PLUMBI IODIDI.

OINTMENT OF IODIDE OF LEAD.

Take of Iodide of Lead, in very fine powder, sixty grains;

Ointment four hundred and twenty grains.

Rub the Iodide of Lead with the Ointment, gradually added, until they are thoroughly mixed.

UNGUENTUM POTASSII IODIDI.

OINTMENT OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, in fine powder, sixty grains;

Water, boiling hot, half a fluidrachm;

Lard four hundred and twenty grains.

Dissolve the Iodide of Potassium in the Water, in a warm mortar, then add the Lard gradually, and thoroughly mix them.

UNGUENTUM STRAMONII.

STRAMONIUM OINTMENT.

Take of Extract of Stramonium sixty grains,

Water half a fluidrachm;

Lard four hundred and twenty grains.

Rub the Extract with the Water until uniformly soft, then gradually add the Lard, and thoroughly mix them.

UNGUENTUM SULPHURIS.

SULPHUR OINTMENT.

Take of Sublimed Sulphur a troyounce;

Lard two troyounces.

Rub the Sulphur with the Lard, gradually added, until they are thoroughly mixed.

UNGUENTUM SULPHURIS IODIDI.

OINTMENT OF IODIDE OF SULPHUR.

Take of Iodide of Sulphur, in very fine powder, thirty grains;
Lard a troyounce.

Rub the Iodide of Sulphur with the Lard, gradually added, until they are thoroughly mixed.

UNGUENTUM TABACI.

TOBACCO OINTMENT.

Take of Tobacco, in fine powder, half a troyounce;
Lard eight troyounces;
Water a sufficient quantity.

Moisten the Tobacco with a little Water, introduce it into a conical glass percolator, and, having pressed it firmly, pour Water upon it until four fluidounces of liquid have passed. Evaporate this liquid to the consistence of a soft extract, and mix it thoroughly with the Lard.

UNGUENTUM VERATRIÆ.

VERATRIA OINTMENT.

Take of Veratria twenty grains;
Lard a troyounce.

Rub the Veratria with a little of the Lard; then gradually add the remainder, and thoroughly mix them.

UNGUENTUM ZINCI OXIDI.

OINTMENT OF OXIDE OF ZINC.

Take of Oxide of Zinc eighty grains;
Ointment of Benzoin four hundred grains.

Rub the Oxide of Zinc with the Ointment of Benzoin, gradually added, until they are thoroughly mixed.

VERATRIA.

VERATRIA.

VERATRIA.

Take of Cevadilla, in moderately fine powder, twenty-four troyounces;
Alcohol,
Sulphuric Acid,
Magnesia,
Water of Ammonia,
Purified Animal Charcoal,
Water, each, a sufficient quantity.

Digest the Cevadilla with eight pints of Alcohol, for four hours, in a distillatory apparatus, with a heat approaching to boiling, and pour off the liquid. To the residue add eight pints more of Alcohol mixed with the portion distilled, and, having digested for an hour, pour off the liquid as before. Digest for a third time with the same quantity of Alcohol, together with the portion last distilled, and again pour off. Press the remains of the Cevadilla, mix and strain the liquids, and, by means of a water-bath, distil off the alcohol. Boil the residue three

or four times in Water acidulated with Sulphuric Acid, mix and strain the liquids, and evaporate to the consistence of syrup. Add Magnesia in slight excess, shake the mixture frequently, then express, and wash what remains. Repeat the expression and washing two or three times, and, having dried the residue, digest it with a gentle heat several times in Alcohol, and strain after each digestion. Distil off the alcohol from the mixed liquids, boil the residue for fifteen minutes in Water mixed with a little Sulphuric Acid and Purified Animal Charcoal, and strain. Having thoroughly washed what remains, mix the washings with the strained liquid, evaporate with a moderate heat to the consistence of thin syrup, and drop in sufficient Water of Ammonia to precipitate the Veratria. Lastly, wash the alkaloid with water, and dry it with a gentle heat.

Veratria, thus prepared, is pulverulent, grayish-white, inodorous, but very irritant to the nostrils. It has an acrid, bitter taste, causing a sensation of tingling, with numbness in the tongue. It is very slightly soluble in water, but readily and wholly dissolved by alcohol. It has an alkaline reaction, and is entirely dissipated by a red heat. With nitric acid it forms a yellow solution, and, by contact with con centrated sulphuric acid, becomes intensely red.

VINA.

VINUM ALOES.

WINE OF ALOES.

Take of Socotrine Aloes, in fine powder, a troyounce;
Cardamom, in moderately fine powder,

Ginger, in moderately fine powder, each, sixty grains;
Sherry Wine a pint.

Macerate for seven days, with occasional agitation, and filter through paper.

VINUM ANTIMONII.

ANTIMONIAL WINE.

Take of Tartrate of Antimony and Potassium thirty-two grains;
Boiling Distilled Water a fluidounce;
Sherry Wine a sufficient quantity.

Dissolve the salt in the Distilled Water, and, while the solution is hot, add sufficient Sherry Wine to make it measure a pint.

VINUM COLCHICI RADICIS.

WINE OF COLCHICUM ROOT.

Take of Colchicum Root, in moderately fine powder, twelve troyounces;
Sherry Wine a sufficient quantity.

Moisten the powder with four fluidounces of Sherry Wine, pack it firmly in a conical percolator, and gradually pour Sherry Wine upon it until two pints of filtered liquid are obtained.

VINUM COLCHICI SEMINIS.

WINE OF COLCHICUM SEED.

Take of Colchicum Seed, in moderately coarse powder, four troyounces;
Sherry Wine two pints.

Macerate for seven days, with occasional agitation; then express, and filter through paper.

VINUM ERGOTÆ.

WINE OF ERGOT.

Take of Fluid Extract of Ergot four fluidounces;
Sherry Wine twenty-eight fluidounces.
Mix them, and filter through paper.

VINUM IPECACUANHÆ.

WINE OF IPECACUANHA.

Take of Fluid Extract of Ipecacuanha two fluidounces;
Sherry Wine thirty fluidounces.
Mix them, and filter through paper.

VINUM OPII.

WINE OF OPIUM.

Take of Opium, dried, and in moderately fine powder, two troyounces;
Cinnamon, in moderately fine powder,
Cloves, in moderately fine powder, each, sixty grains;
Sherry Wine a sufficient quantity.

Mix the powders with fifteen fluidounces of Sherry Wine, and macerate for seven days, with occasional agitation; then transfer the mixture to a conical percolator, and, when the liquid has passed the surface, gradually pour on Sherry Wine until a pint of filtered liquid is obtained.

VINUM RHEI.

WINE OF RHUBARB.

Take of Rhubarb, in moderately coarse powder, two troyounces;
Canella, in moderately fine powder, sixty grains;
Sherry Wine fourteen fluidounces;
Diluted Alcohol a sufficient quantity.

Mix two fluidounces of Diluted Alcohol with the Sherry Wine, and moisten the powders, previously rubbed together, with half a fluidounce of the mixture; then transfer them to a conical percolator, and gradually pour upon them the remainder of the mixture, and afterwards Diluted Alcohol, until a pint of filtered liquid is obtained.

VINUM TABACI

WINE OF TOBACCO.

Take of Tobacco, in moderately fine powder, a troyounce;
Sherry Wine a pint.

Macerate for seven days, with occasional agitation; then express, and filter through paper.

ZINCUM.

ZINCI ACETAS.

ACETATE OF ZINC.

Take of Commercial Oxide of Zinc two troyounces;
Acetic Acid eight fluidounces and a half;
Distilled Water five fluidounces.

Mix the Acid and Water, and digest the Oxide of Zinc in the mixture for half an hour, then heat to the boiling point, filter while hot, and set aside to crystallize. Drain the crystals in a funnel, and dry them upon bibulous paper. An additional quantity of crystals may be obtained by evaporating the mother-liquor to one-half, slightly acidulating with acetic acid, and crystallizing.

In white, micaceous crystals, which effloresce in a dry atmosphere. It is very soluble in water, and its solution yields white precipitates with ferrocyanide of potassium and hydrosulphate of ammonium. The salt is decomposed by sulphuric acid with the escape of acetous vapours.

ZINCI CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF ZINC.

Take of Sulphate of Zinc,
Carbonate of Sodium, each, twelve troyounces;
Water eight pints.

Dissolve the salts separately, with the aid of heat, each in four pints of the Water. Then mix the solutions, and, having stirred the mixture, set it by that the precipitate may subside. Lastly, having poured off the supernatant liquid, wash the precipitate with hot water until the washings are nearly tasteless, and dry it with a gentle heat.

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.

Take of Solution of Chloride of Zinc a convenient quantity.

Evaporate the solution to dryness in an evaporating dish, fuse the dry mass, pour the liquid on a flat stone, and when it has congealed, break the mass in pieces, and keep the fragments in a well-stopped bottle.

A white, deliquescent salt, wholly soluble in water, alcohol, and ether. Its aqueous solution yields with nitrate of silver a white precipitate insoluble in nitric acid. It forms white precipitates also with ferrocyanide of potassium and hydrosulphate of ammonium.

ZINCI OXIDUM.

OXIDE OF ZINC.

Take of Precipitated Carbonate of Zinc twelve troy-ounces.

Expose it, in a shallow vessel, to a low-red heat, until the water and carbonic acid are wholly expelled.

A yellowish-white powder, insoluble in water, but soluble in dilute sulphuric and muriatic acids without effervescence. The solutions, when neutral, yield white precipitates with ferrocyanide of potassium and hydrosulphate of ammonium.

TABLES.

I.—SUBSTANCES ADDED TO THE MATERIA MEDICA OF THE PHARMACOPOEIA.

Primary List.

Acidum Carbolicum.	Carbolic Acid.
Acidum Carbolicum Impurum.	Impure Carbolic Acid.
Acidum Oxalicum.	Oxalic Acid.
Ammonii Nitras.	Nitrate of Ammonium.
Calcii Hypophosphis.	Hypophosphite of Calcium.
Cannabis Americana.	American Hemp.
Cannabis Indica.	Indian Hemp.
Cerii Oxalas.	Oxalate of Cerium.
Chloral.	Chloral.
Cinchona.	Cinchona.
Conii Fructus.	Conium Seed.
Cuprum.	Copper.
Ferri Hypophosphis.	Hypophosphite of Iron.
Gossypii Radicis Cortex.	Bark of Cotton Root.
Iodoformum.	Iodoform.
Origanum.	Origanum.
Physostigma.	Calabar Bean.
Potassii Hypophosphis.	Hypophosphite of Potassium.
Potassii Sulphis.	Sulphite of Potassium.
Sodii Bicarbonas Venalis.	Commercial Bicarbonate of Sodium.
Sodii Hypophosphis.	Hypophosphite of Sodium.
Sodii Hyposulphis.	Hyposulphite of Sodium.
Sodii Nitras.	Nitrate of Sodium.
Zinci Oxidum Venale.	Commercial Oxide of Zinc.

Secondary List.

Asclepias Incarnata.	Flesh-colored Asclepias.
Asclepias Syriaca.	Common Silkweed.
Castanea.	Chestnut.

II.—SUBSTANCES DISMISSED FROM THE MATERIA MEDICA.

Primary List.

Oleum Bubulum.	Neatsfoot Oil.

Secondary List.

Aletris.	Star Grass.
Angelica.	Angelica.
Arum.	Indian Turnip.
Gossypii Radix.	Cotton Root.

III.—PREPARATIONS ADDED TO THE PHARMACOPOEIA.

Ammonii Benzoas.	Benzoate of Ammonium.
Ammonii Bromidum.	Bromide of Ammonium.
Ammonii Chloridum Purificatum.	Purified Chloride of Ammonium.
Ammonii Iodidum.	Iodide of Ammonium.
Aqua Acidi Carbolici.	Carbolic Acid Water.
Aqua Anisi.	Anise Water.
Charta Cantharidis.	Cantharides Paper.
Charta Sinapis.	Mustard Paper.
Collodium Flexile.	Flexible Collodion.
Digitalinum.	Digitalin.
Emplastrum Aconiti.	Aconite Plaster.
Extractum Belladonnæ Radicis Fluidum.	Fluid Extract of Belladonna Root.
Extractum Calumbæ Fluidum.	Fluid Extract of Columbo.
Extractum Cannabis Americanæ.	Extract of American Hemp.
Extractum Chimaphilæ Fluidum.	Fluid Extract of Pipsissewa.
Extractum Conii Fructûs Fluidum.	Fluid Extract of Conium Seed.
Extractum Cornûs Floridæ Fluidum.	Fluid Extract of Dogwood.
Extractum Cubebæ Fluidum.	Fluid Extract of Cubeb.
Extractum Digitalis Fluidum.	Fluid Extract of Digitalis.
Extractum Erigerontis Canadensis Fluidum.	Fluid Extract of Canada Erigeron.
Extractum Gelsemii Fluidum.	Fluid Extract of Yellow Jasmine.

Extractum Geranii Fluidum.	Fluid Extract of Geranium.
Extractum Glycyrrhizæ Fluidum.	Fluid Extract of Liquorice Root.
Extractum Gossypii Radicis Fluidum.	Fluid Extract of Cotton Root.
Extractum Hydrastis Fluidum.	Fluid Extract of Hydrastis.
Extractum Krameriæ Fluidum.	Fluid Extract of Rhatany.
Extractum Matico Fluidum.	Fluid Extract of Matico.
Extractum Mezerei Fluidum.	Fluid Extract of Mezereon.
Extractum Pareiræ Fluidum.	Fluid Extract of Pareira Brava.
Extractum Physostigmatis.	Extract of Calabar Bean.
Extractum Rubi Fluidum.	Fluid Extract of Blackberry.
Extractum Sabinæ Fluidum.	Fluid Extract of Savine.
Extractum Scillæ Fluidum.	Fluid Extract of Squill.
Extractum Senegæ Fluidum.	Fluid Extract of Seneka.
Extractum Stillingiæ Fluidum.	Fluid Extract of Stillingia.
Extractum Stramonii Seminis.	Extract of Stramonium Seed.
Ferri et Strychniæ Citras.	Citrate of Iron and Strychnia.
Ferri Oxalas.	Oxalate of Iron.
Glyceritum Acidi Carbolici.	Glycerite of Carbolic Acid.
Glyceritum Acidi Gallici.	Glycerite of Gallic Acid.
Glyceritum Acidi Tannici.	Glycerite of Tannic Acid.
Glyceritum Picis Liquidæ.	Glycerite of Tar.
Glyceritum Sodii Boratis.	Glycerite of Borate of Sodium.
Hydrargyri Oxidum Flavum.	Yellow Oxide of Mercury.
Linimentum Aconiti.	Liniment of Aconite.
Linimentum Plumbi Subacetatis.	Liniment of Subacetate of Lead.
Liquor Arsenici Chloridi.	Solution of Chloride of Arsenic.
Liquor Ferri Chloridi.	Solution of Chloride of Iron.
Liquor Potassii Permanganatis.	Solution of Permanganate of Potassium.
Liquor Sodii Arseniatis.	Solution of Arseniate of Sodium.
Liquor Zinci Chloridi.	Solution of Chloride of Zinc.
Lithii Citras.	Citrate of Lithium.
Oleoresina Filicis.	Oleoresin of Fern.
Oleum Origani.	Oil of Origanum.
Oleum Rutæ.	Oil of Rue.
Pyroxylon.	Pyroxylon.
Soda.	Soda.
Sodii Arsenias.	Arseniate of Sodium.
Spiritus Juniperi.	Spirit of Juniper.

Succus Conii.	Juice of Conium.
Succus Taraxaci.	Juice of Dandelion.
Suppositoria Acidi Carbolici.	Suppositories of Carbolic Acid.
Suppositoria Acidi Tannici.	Suppositories of Tannic Acid.
Suppositoria Aloës.	Suppositories of Aloes.
Suppositoria Assafœtidæ.	Suppositories of Assafetida.
Suppositoria Belladonnæ.	Suppositories of Belladonna.
Suppositoria Morphiæ.	Suppositories of Morphia.
Suppositoria Opii.	Suppositories of Opium.
Suppositoria Plumbi.	Suppositories of Lead.
Suppositoria Plumbi et Opii.	Suppositories of Lead and Opium.
Tinctura Aurantii.	Tincture of Orange Peel.
Tinctura Benzoini.	Tincture of Benzoin.
Trochisci Acidi Tannici.	Troches of Tannic Acid.
Trochisci Morphiæ et Ipecacuanhæ.	Troches of Morphia and Ipecacuanha.
Trochisci Potassii Chloratis.	Troches of Chlorate of Potassium.
Trochisci Santonini.	Troches of Santonin.
Unguentum Acidi Carbolici.	Ointment of Carbolic Acid.
Unguentum Cantharidis.	Ointment of Cantharides.
Unguentum Hydrargyri Iodidi Rubri.	Ointment of Red Iodide of Mercury.
Unguentum Hydrargyri Oxidi Flavi.	Ointment of Yellow Oxide of Mercury.
Unguentum Mezerei.	Ointment of Mezereon.
Unguentum Plumbi Iodidi.	Ointment of Iodide of Lead.

IV.—PREPARATIONS DISMISSED FROM THE PHARMACOPOEIA.

Acetum Colchici.	Vinegar of Colchicum.
Acidum Hydriodicum Dilutum.	Diluted Hydriodic Acid.
Extractum Cannabis Purificatum.	Purified Extract of Hemp.
Extractum Conii Fluidum.	Fluid Extract of Hemlock.
Extractum Stramonii.	Extract of Stramonium.
Sodæ Valerianas.	Valerianate of Soda.
Tinctura Aconiti Folii.	Tincture of Aconite Leaf.

V.—CHANGES OF LATIN OFFICINAL NAMES.

Name in the Pharmacopœia of 1860.	*New Name.*
Aconiti Folium.	Aconiti Folia.
Alumen.	Aluminii et Potassii Sulphas.
Aluminæ et Ammoniæ Sulphas.	Alumen.
Ammonia.*	Ammonium.
Ammoniæ Carbonas.	Ammonii Carbonas.
Ammoniæ Murias.	Ammonii Chloridum.
Ammoniæ Sulphas.	Ammonii Sulphas.
Ammoniæ Valerianas.	Ammonii Valerianas.
Asclepias.	Asclepias Tuberosa.
Barytæ Carbonas.	Barii Carbonas.
Belladonnæ Folium.	Belladonnæ Folia.
Calcis Carbonas Præcipitata.	Calcii Carbonas Præcipitata.
Calcis Phosphas Præcipitata.	Calcii Phosphas Præcipitata.
Ceratum Adipis.	Ceratum.
Conium.	Conii Folia.
Extractum Aconiti Alcoholicum.	Extractum Aconiti.
Extractum Arnicæ Alcoholicum.	Extractum Arnicæ.
Extractum Cannabis.	Extractum Cannabis Indicæ.
Extractum Colocynthidis Alcoholicum.	Extractum Colocynthidis.
Extractum Digitalis Alcoholicum.	Extractum Digitalis.
Extractum Hellebori Alcoholicum	Extractum Hellebori.
Extractum Ignatiæ Alcoholicum.	Extractum Ignatiæ.
Extractum Nucis Vomicæ Alcoholicum.	Extractum Nucis Vomicæ.
Extractum Rhei Alcoholicum.	Extractum Rhei.
Extractum Sarsaparillæ Fluidum Compositum.	Extractum Sarsaparillæ Compositum Fluidum.
Extractum Senegæ Alcoholicum.	Extractum Senegæ.
Extractum Stramonii Alcoholicum.	Extractum Stramonii Foliorum.
Extractum Valerianæ Alcoholicum.	Extractum Valerianæ.
Ferri et Ammoniæ Citras.	Ferri et Ammonii Citras.
Ferri et Ammoniæ Sulphas.	Ferri et Ammonii Sulphas.
Ferri et Ammoniæ Tartras.	Ferri et Ammonii Tartras.

* Changed as the General Heading of a class of Preparations.

Ferri et Potassæ Tartras.	Ferri et Potassii Tartras.
Hyoscyami Folium.	Hyoscyami Folia.
Liquor Ammoniæ Acetatis.	Liquor Ammonii Acetatis.
Liquor Magnesiæ Citratis.	Liquor Magnesii Citratis.
Liquor Potassæ Arsenitis.	Liquor Potassii Arsenitis.
Liquor Potassæ Citratis.	Liquor Potassii Citratis.
Lithiæ Carbonas.	Lithii Carbonas.
Magnesiæ Carbonas.	Magnesii Carbonas.
Magnesiæ Sulphas.	Magnesii Sulphas.
Mel Sodæ Boratis.	Mel Sodii Boratis.
Mistura Potassæ Citratis.	Mistura Potassii Citratis.
Oleum Amygdalæ Dulcis.	Oleum Amygdalæ Expressum.
Pilulæ Ferri Carbonatis.	Pilula Ferri Carbonatis.
Pilulæ Saponis Compositæ.	Pilula Saponis Composita.
Potassæ Acetas.	Potassii Acetas.
Potassæ Bicarbonas.	Potassii Bicarbonas.
Potassæ Bichromas.	Potassii Bichromas.
Potassæ Bitartras.	Potassii Bitartras.
Potassæ Carbonas.	Potassii Carbonas.
Potassæ Carbonas Impura.	Potassii Carbonas Impura.
Potassæ Carbonas Pura.	Potassii Carbonas Pura.
Potassæ Chloras.	Potassii Chloras.
Potassæ Citras.	Potassii Citras.
Potassæ et Sodæ Tartras.	Potassii et Sodii Tartras.
Potassæ Nitras.	Potassii Nitras.
Potassæ Permanganas.	Potassii Permanganas.
Potassæ Sulphas.	Potassii Sulphas.
Potassæ Tartras.	Potassii Tartras.
Sassafras Radicis Cortex.	Sassafras.
Sesami Folium.	Sesamum.
Sodæ Acetas.	Sodii Acetas.
Sodæ Bicarbonas.	Sodii Bicarbonas.
Sodæ Boras.	Sodii Boras.
Sodæ Carbonas.	Sodii Carbonas.
Sodæ Carbonas Exsiccata.	Sodii Carbonas Exsiccata.
Sodæ Phosphas.	Sodii Phosphas.
Sodæ Sulphas.	Sodii Sulphas.
Sodæ Sulphis.	Sodii Sulphis.
Stramonii Folium.	Stramonii Folia.
Trochisci Sodæ Bicarbonatis.	Trochisci Sodii Bicarbonatis.

Ulmus Fulva.	Ulmus.
Unguentum Adipis.	Unguentum.

VI.—CHANGES OF ENGLISH OFFICINAL NAMES.

Name in the Pharmacopœia of 1860.	*New Name.*
Acetate of Potassa.	Acetate of Potassium.
Acetate of Soda.	Acetate of Sodium.
Aconite Leaf.	Aconite Leaves.
Alcoholic Extract of Aconite.	Extract of Aconite.
Alcoholic Extract of Arnica.	Extract of Arnica.
Alcoholic Extract of Black Hellebore.	Extract of Black Hellebore.
Alcoholic Extract of Colocynth.	Extract of Colocynth.
Alcoholic Extract of Digitalis.	Extract of Digitalis.
Alcoholic Extract of Hemlock.	Alcoholic Extract of Conium.
Alcoholic Extract of Henbane.	Alcoholic Extract of Hyoscyamus.
Alcoholic Extract of Ignatia.	Extract of Ignatia.
Alcoholic Extract of Nux Vomica.	Extract of Nux Vomica.
Alcoholic Extract of Rhubarb.	Extract of Rhubarb.
Alcoholic Extract of Stramonium.	Extract of Stramonium Leaves.
Alcoholic Extract of Valerian.	Extract of Valerian.
Alum.	Sulphate of Aluminium and Potassium.
Bark of Sassafras Root.	Sassafras.
Belladonna Leaf.	Belladonna Leaves.
Benne Leaf.	Benne.
Bicarbonate of Potassa.	Bicarbonate of Potassium.
Bicarbonate of Soda.	Bicarbonate of Sodium.
Bitartrate of Potassa.	Bitartrate of Potassium.
Blackberry Root.	Blackberry.
Black-oak Bark.	Black Oak.
Borate of Soda.	Borate of Sodium.
Canada Fleabane.	Canada Erigeron.
Carbonate of Ammonia.	Carbonate of Ammonium.
Carbonate of Baryta.	Carbonate of Barium.
Carbonate of Lithia.	Carbonate of Lithium.

Carbonate of Magnesia.	Carbonate of Magnesium.
Carbonate of Potassa.	Carbonate of Potassium.
Carbonate of Soda.	Carbonate of Sodium.
Cerate of Cantharides.	Cantharides Cerate.
Cerate of Lard.	Cerate.
Cerate of Savine.	Savine Cerate.
Cerate of Spermaceti.	Spermaceti Cerate.
Chlorate of Potassa.	Chlorate of Potassium.
Citrate of Potassa.	Citrate of Potassium.
Compound Pills of Soap.	Compound Pill of Soap.
Compound Plaster of Galbanum.	Compound Galbanum Plaster.
Cranesbill.	Geranium.
Decoction of White-oak Bark.	Decoction of White Oak.
Dried Carbonate of Soda.	Dried Carbonate of Sodium.
Extract of Hemlock.	Extract of Conium.
Extract of Henbane.	Extract of Hyoscyamus.
Fleabane.	Erigeron.
Fluid Extract of Henbane.	Fluid Extract of Hyoscyamus.
Fluid Extract of Wild-cherry Bark.	Fluid Extract of Wild-cherry.
Hemlock.	Conium Leaves.
Henbane Leaf.	Hyoscyamus Leaves.
Henbane Seed.	Hyoscyamus Seed.
Honey of Borate of Soda.	Honey of Borate of Sodium.
Impure Carbonate of Potassa.	Impure Carbonate of Potassium.
Infusion of Wild-cherry Bark.	Infusion of Wild-cherry.
Mixture of Citrate of Potassa.	Mixture of Citrate of Potassium.
Muriate of Ammonia.	Chloride of Ammonium.
Nitrate of Potassa.	Nitrate of Potassium.
Oil of Sweet Almond.	Expressed Oil of Almond.
Ointment of Antimony.	Antimonial Ointment.
Ointment of Iodine.	Iodine Ointment.
Ointment of Lard.	Ointment.
Ointment of Mercury.	Mercurial Ointment.
Ointment of Stramonium.	Stramonium Ointment.
Ointment of Sulphur.	Sulphur Ointment.
Ointment of Tobacco.	Tobacco Ointment.
Ointment of Veratria.	Veratria Ointment.
Permanganate of Potassa.	Permanganate of Potassium.
Phosphate of Soda.	Phosphate of Sodium.
Pills of Carbonate of Iron.	Pill of Carbonate of Iron.

Plaster of Ammoniac.	Ammoniac Plaster.
Plaster of Antimony.	Antimonial Plaster.
Plaster of Arnica.	Arnica Plaster.
Plaster of Assafetida.	Assafetida Plaster.
Plaster of Belladonna.	Belladonna Plaster.
Plaster of Burgundy Pitch.	Burgundy Pitch Plaster.
Plaster of Canada Pitch.	Canada Pitch Plaster.
Plaster of Iron.	Iron Plaster.
Plaster of Lead.	Lead Plaster.
Plaster of Mercury.	Mercurial Plaster.
Plaster of Opium.	Opium Plaster.
Precipitated Carbonate of Lime.	Precipitated Carbonate of Calcium.
Precipitated Phosphate of Lime.	Precipitated Phosphate of Calcium.
Pure Carbonate of Potassa.	Pure Carbonate of Potassium.
Solution of Acetate of Ammonia.	Solution of Acetate of Ammonium.
Solution of Arsenite of Potassa.	Solution of Arsenite of Potassium.
Solution of Citrate of Magnesia.	Solution of Citrate of Magnesium.
Solution of Citrate of Potassa.	Solution of Citrate of Potassium.
Stramonium Leaf.	Stramonium Leaves.
Sulphate of Alumina and Ammonia.	Alum.
Sulphate of Ammonia.	Sulphate of Ammonium.
Sulphate of Iron and Ammonia.	Sulphate of Iron and Ammonium.
Sulphate of Magnesia.	Sulphate of Magnesium.
Sulphate of Potassa.	Sulphate of Potassium.
Sulphate of Soda.	Sulphate of Sodium.
Sulphite of Soda.	Sulphite of Sodium.
Tartrate of Iron and Ammonia.	Tartrate of Iron and Ammonium.
Tartrate of Iron and Potassa.	Tartrate of Iron and Potassium.
Tartrate of Potassa.	Tartrate of Potassium.
Tartrate of Potassa and Soda.	Tartrate of Potassium and Sodium.
Tincture of Hemlock.	Tincture of Conium.
Tincture of Henbane.	Tincture of Hyoscyamus.
Troches of Bicarbonate of Soda.	Troches of Bicarbonate of Sodium.
Valerianate of Ammonia.	Valerianate of Ammonium.
White-oak Bark.	White Oak.
Wild-cherry Bark.	Wild-cherry.
Wine of Antimony.	Antimonial Wine.

VII.—SUBSTANCES WHOSE POSITIONS HAVE BEEN CHANGED.

Transferred from the Primary List of the Materia Medica to the Preparations.

Extractum Cannabis.	Extract of Hemp.

The name being changed to

Extractum Cannabis Indicæ.	Extract of Indian Hemp.

Transferred from the Preparations to the Primary List of the Materia Medica.

Acidum Valerianicum.	Valerianic Acid.
Zinci Valerianas.	Valerianate of Zinc.

Medicines transferred from the Secondary to the Primary List of the Materia Medica.

Gelsemium.	Yellow Jasmine.
Hydrastis.	Hydrastis.
Ruta.	Rue.

VIII.—NEW MEANINGS OF OLD NAMES.

Alumen.	Name formerly given to the Sulphate of Alumina and Potassa; now given to the Sulphate of Aluminium and Ammonium.
Emplastrum Belladonnæ.	Name formerly given to the Plaster prepared from Belladonna Leaves; now given to the Plaster prepared from Belladonna Root.

WEIGHTS AND MEASURES

OF THE

UNITED STATES PHARMACOPŒIA.

One Pound,	℔	=	12 Ounces	=	5,760 Grains.
One Ounce,	℥	=	8 Drachms	=	480 Grains.
One Drachm,	ʒ	=	3 Scruples	=	60 Grains.
One Scruple,	℈		. . . . .	=	20 Grains.
One Grain,	gr.		. . . . .	=	1 Grain.
One Gallon,	C	=	8 Pints	=	61,440 Minims.
One Pint,	O	=	16 Fluidounces	=	7,680 Minims.
One Fluidounce,	f℥	=	8 Fluidrachms	=	480 Minims.
One Fluidrachm,	fʒ		. . . . .	=	60 Minims.
One Minim,	♏		. . . . .	=	1 Minim.

WEIGHTS AND MEASURES OF THE METRICAL SYSTEM.

MEASURES OF LENGTH.

One Myriametre	=	10,000 Metres.
One Kilometre	=	1,000 Metres.
One Hectometre	=	100 Metres.
One Decametre	=	10 Metres.
One METRE	=	the ten-millionth part of a quarter of the meridian of the earth.
One Decimetre	=	the tenth part of one Metre, or 0.1 Metre.

One Centimetre	=	the hundredth part of one Metre, or 0.01 Metre.
One Millimetre	=	the thousandth part of one Metre, or 0.001 Metre.

WEIGHTS.

One Myriagramme	=	10,000 Grammes.
One Kilogramme	=	1,000 Grammes.
One Hectogramme	=	100 Grammes.
One Decagramme	=	10 Grammes.
One GRAMME	=	the weight of a cubic centimetre of water at 4° C.
One Decigramme	=	the tenth part of one Gramme, or 0.1 Gramme.
One Centigramme	=	the hundredth part of one Gramme, or 0.01 Gramme.
One Milligramme	=	the thousandth part of one Gramme, or 0.001 Gramme.

MEASURES OF CAPACITY.

One Myrialitre	=	10 cubic Metres, or the measure of 10 Milliers of Water.
One Kilolitre	=	1 cubic Metre, or the measure of 1 Millier of Water.
One Hectolitre	=	100 cubic Decimetres, or the measure of 1 Quintal of Water.
One Decalitre	=	10 cubic Decimetres, or the measure of 1 Myriagramme of Water.
One LITRE	=	1 cubic Decimetre, or the measure of 1 Kilogramme of Water.
One Decilitre	=	100 cubic Centimetres, or the measure of 1 Hectogramme of Water.
One Centilitre	=	10 cubic Centimetres, or the measure of 1 Decagramme of Water.
One Millilitre	=	1 cubic Centimetre, or the measure of 1 Gramme of Water.

RELATION OF WEIGHTS AND MEASURES OF THE U. S PHARMACOPŒIA TO EACH OTHER.

In distilled water at the temperature of 60°.

One Pound	=	0.7900031	Pint	=	6067.2238 Minims.
One Ounce	=	1.0533376	Fluidounces	=	505.6019 Minims.
One Drachm	=	1.0533376	Fluidrachms	=	63.2002 Minims.
One Scruple		. . . . .		=	21.0667 Minims.
One Grain		. . . . .		=	1.0533 Minims.
One Gallon	=	10.1265427	Pounds	=	58328.8862 Grains.
One Pint	=	1.2658178	Pounds	=	7291.1107 Grains.
One Fluidounce	=	0.9493633	Ounce	=	455.6944 Grains.
One Fluidrachm	=	0.9493633	Drachm	=	56.9618 Grain.
One Minim		. . . . .		=	0.9493 Grain.

RELATION OF MEASURES OF THE U. S. PHARMACOPŒIA TO CUBIC MEASURE.

One Gallon	=	231.	Cubic Inches.
One Pint	=	28.875	Cubic Inches.
One Fluidounce	=	1.80468	Cubic Inches.
One Fluidrachm	=	0.22558	Cubic Inch.
One Minim	=	0.00375	Cubic Inch.

RELATION OF WEIGHTS OF THE U. S. PHARMACOPŒIA TO METRICAL WEIGHTS.

Fractions of a grain in Milligrammes.

Grain.		Milligrammes.
$\frac{1}{64}$	=	1.012
$\frac{1}{60}$	=	1.079
$\frac{1}{50}$	=	1.295
$\frac{1}{48}$	=	1.349
$\frac{1}{40}$	=	1.619
$\frac{1}{36}$	=	1.799
$\frac{1}{30}$	=	2.159
$\frac{1}{25}$	=	2.591
$\frac{1}{24}$	=	2.699
$\frac{1}{20}$	=	3.239
$\frac{1}{16}$	=	4.049
$\frac{1}{15}$	=	4.319
$\frac{1}{12}$	=	5.399
$\frac{1}{10}$	=	6.479
$\frac{1}{8}$	=	8.098
$\frac{1}{6}$	=	10.798
$\frac{1}{5}$	=	12.958
$\frac{1}{4}$	=	16.197
$\frac{1}{3}$	=	21.597
$\frac{1}{2}$	=	32.395

Grains in equivalent metrical weights.

Grains.		Centigrammes.
1	=	6.479
		Decigrammes.
2	=	1.295
3	=	1.943
4	=	2.591
5	=	3.239
6	=	3.887
7	=	4.535
8	=	5.183
9	=	5.831
10	=	6.479
12	=	7.775
15	=	9.718
		Grammes.
16	=	1.036
20	=	1.295
24	=	1.555
25	=	1.619
30	=	1.943
40	=	2.591
50	=	3.239
60	=	3.887

Drachms, Ounces, and Pounds in equivalent metrical weights.

Drachms.		Grammes.
1	=	3.887
2	=	7.775
		Decagrammes
3	=	1.166
4	=	1.555
5	=	1.943
6	=	2.332
7	=	2.721
Ounces.		
1	=	3.1103
2	=	6.2206
3	=	9.3309
		Hectogrammes.
4	=	1.2441
5	=	1.5551
6	=	1.8661
7	=	2.1772
8	=	2.4882
9	=	2.7992
10	=	3.1103
11	=	3.4213
Pounds.		
1	=	3.7324
2	=	7.4648
		Kilogrammes.
3	=	1.1197

RELATION OF METRICAL WEIGHTS TO WEIGHTS OF THE U. S. PHARMACOPŒIA.

Metrical Weights.	*Exact equivalents in grains.*	*Approximate equivalents in grains.*
Milligrammes.		
3 =	.0463	$\frac{1}{22}$
1 =	.0154	$\frac{1}{65}$
2 =	.0308	$\frac{1}{32}$
4 =	.0617	$\frac{1}{16}$
5 =	.0771	$\frac{1}{13}$
6 =	.0926	$\frac{1}{11}$
7 =	.1080	$\frac{1}{9}$
8 =	.1234	$\frac{1}{8}$
9 =	.1389	$\frac{1}{7}$
Centigrammes.		
1 =	.1543	$\frac{1}{6}$
2 =	.3086	$\frac{1}{3}$
3 =	.4630	$\frac{6}{13}$
4 =	.6173	$\frac{7}{11}$
5 =	.7717	$\frac{3}{4}$
6 =	.9260	$\frac{9}{10}$
7 =	1.0803	1
8 =	1.2347	$1\frac{1}{4}$
9 =	1.3890	$1\frac{1}{3}$
Decigrammes.		
1 =	1.543	$1\frac{1}{2}$
2 =	3.086	3
3 =	4.630	$4\frac{1}{2}$
4 =	6.173	6
5 =	7.717	$7\frac{1}{2}$
6 =	9.260	9
7 =	10.803	11
8 =	12.347	$12\frac{1}{2}$
9 =	13.890	14

Metrical Weights.	*Exact equivalents in grains.*	*Approximate equivalents in Troy Weight.*
Grammes.		
1 =	15.434	gr. xv.
2 =	30.868	℥ss.
3 =	46.302	℈ij.
4 =	61.736	℥i.
5 =	77.170	℈iv.
6 =	92.604	℥iss.
7 =	108.038	℈vss.
8 =	123.472	℥ij.
9 =	138.906	℈vij.
Decagrammes.		
1 =	154.340	℥iiss.
2 =	308.680	℥v.
3 =	463.020	℥viiss.
4 =	617.360	℥x.
5 =	771.701	℥xiij.
6 =	926.041	℥xv.
7 =	1,080.381	℥xviij.
8 =	1,234.721	℥xx.
9 =	1,389.062	℥xxiij.
Hectogrammes.		
1 =	1,543.402	℥iii ℈v.
2 =	3,086.804	℥vj ℥iij.
3 =	4,630.206	℥ix ℥v.
4 =	6,173.609	℔i ℥vij.
5 =	7,717.011	℔i ℥iv.
6 =	9,260.413	℔i ℥vij.
7 =	10,803.816	℔i ℥x ℥iv.
8 =	12,347.218	℔ij ℥i ℥v.
9 =	13,890.620	℔ij ℥v.
Kilogramme.		
1 =	15,434.023	℔ij ℥viij.
Myriogramme.		
1 =	154,340.23	℔ xxvi. ℥ix ℥iv.

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THE END.

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$Fe_2'''(CO_4)_3$

$Fe''CO_4$

$K_2CO_3 + Ca''2HO = 2KHO + Ca''CO_3$.

$3\ Fe''Cl_4 + Na_2HPO_4 = Fe_3''(PO_4)_2 + 2NaCl_4 + H_2Cl_4$

$Fe''NH_4(CO_4')_2$

$3\ K_4Fe''Cl_6 + 2Fe_2'''3Cl_4 = Fe_2'''Fe_3''$

$H_2C_2O_4 = H_2O + Cu_2 + CO$

$2H_4C_2 + 2KHO = 3H_4O + 3KCO + HCO$

$2KHCO_3 = K_2CO_3 + H_2O + CO_2$

$Ca''CO_3 +$

$Na_2CO_3 + Ca''2HO = 2NaHO + CaCO_3$.

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